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ABSTRACT

Presented in the second of three documents is testimony given before the Senate Subcommittee on the Handicapped regarding the delivery of services to and programs for the handicapped. Included are statements from representatives of such agencies as the Council for Exceptional Children, the Higher Education Consortium for Special Education, White House Conference on Handicapped Individuals, and Epilepsy Foundation of America. Additional information, such as an article titled "Medical Devices and Equipment for the Disabled--An Examination," is also provided. (SBH)

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REVIEW OF PROGRAMS FOR THE HANDICAPPED, 1977

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON THE HANDICAPPED

OF THE

COMMITTEE ON HUMAN RESOURCES

UNITED STATES SENATE

NINETY-FIFTH CONGRESS

FIRST SESSION

ON

REVIEW OF PROGRAMS FOR THE HANDICAPPED

PART 2

FEBRUARY 8, 24, AND 25, 1977

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REVIEW OF PROGRAMS FOR THE HANDICAPPED, 1977

Technology and the Handicapped

TUESDAY, FEBRUARY 8, 1977

U.S. SENATE,
SUBCOMMITTEE ON THE HANDICAPPED OF THE
COMMITTEE ON HUMAN RESOURCES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:35 a.m., in room 4232, Dirksen Senate Office Building, Senator Jennings Randolph (chairman) presiding.

Present: Senators Randolph, Stafford, and Brooke.

Staff present: Mrs. Patria G. Forsythe, professional staff member.

Senator RANDOLPH. A pleasant morning to our guests, to those who are witnesses, and to those who have made an innovative breakthrough that we think will serve the handicapped.

This is our second day of the current hearings of the 95th Congress by the Subcommittee on the Handicapped. We are concerned both with the positive role technology and industry can play in bettering the lives of handicapped persons and also with the significant issues surrounding the use of and the application of some of the technological and industrial developments. We recognize that innovations in technology and industry can be vitally important.

Senator Brooke from Massachusetts sits with us today—not as a member of the Committee on Human Resources, or the Subcommittee on the Handicapped—but as an intensely interested Senator on this subject. He sits with us today because he shares our interest that the handicapped person becomes a self-sustaining citizen and participant in the life of the country. The handicapped person, the blind person, the severely deaf person, the retarded person; all of these individuals can become and are increasingly becoming a part of the mainstream of American life.

Today we are going to be focusing on at least part of what I call the breakthrough in technology. We are going to be checking, as it were, the innovations that pertain to the development and use of certain equipment that will be demonstrated today. But also we are thinking about our responsibility as Members of Congress to have a better insight—and Senator Brooke, I think we can agree on this—as to the actual employment practices of industry.

We are, again, privileged to have you with us, and if you would like to say some words of greeting, we will be very happy to hear them.

STATEMENT OF HON. EDWARD W. BROOKE, A U.S. SENATOR FROM THE STATE OF MASSACHUSETTS

Senator **Brooke**. Thank you, Mr. Chairman.

First, I want to commend you and your committee for holding these hearings. You have been the leader in this whole field. I am proud today to introduce to you Kurzweil Computer Products, Inc., a young Cambridge-based organization that has come up with this new reading machine—this revolutionary reading machine. I want to commend Barry Unger, who has worked on the dissemination of the machine and the involvement of consumers in its development, and Raymond Kurzweil, the inventor of the machine.

I am very pleased to have had some small part in working with them on the funding for the development of this idea, for this is revolutionary and has offered so much hope to the blind. I think it is an exceptional piece of work that they have done. I commend them and look forward to the demonstration of it.

Mr. Chairman, we are beginning hearings on the HEW appropriations bill for 1978, and I must go there and chair the hearing. But before I go, I want to wish Mr. Unger and Mr. Kurzweil well. Their parents and friends who are here are proud, but nobody can be more proud of them than I.

Senator **Randolph**. I want to say, you are going to that committee because that committee is going to help us get the necessary funding for this program.

Senator **Brooke**. You authorize it, Mr. Chairman, and we will try to fund it.

Senator **Randolph**. I hope we have no problem with either authorization or funding. While Senator Brooke is present, I want to say—we do not want to sound provincial here this morning—that the first two reading machines, programs with this innovative technology, have gone to Massachusetts. That is understandable because that is where they were developed. But West Virginia is going to match you; we have one reading machine now at Romney, W. Va., and we will have another one soon at Institute, W. Va. Of course we hope they will be in all States in the near future.

Senator **Brooke**. We want them in all States, and we are very pleased that West Virginia is following the leadership of Massachusetts.

Senator **Randolph**. Oh, my. [Laughter.]

Senator **Brooke**. We are pleased to have them everywhere.

Senator **Randolph**. Thank you very, very much. We cannot match you in cold weather, but it was cold out there this morning.

[Discussion off the record.]

Senator **Randolph**. We will begin our formal hearings with the first witnesses, Raymond Kurzweil, the president of Kurzweil Computer Products, Cambridge, Mass., and Barry Unger, executive vice president.

JOINT STATEMENT OF BARRY UNGER, EXECUTIVE VICE PRESIDENT, KURZWEIL COMPUTER PRODUCTS, INC., AND RAYMOND C. KURZWEIL, PRESIDENT

Mr. Unger. Thank you, Mr. Chairman. Before we begin, Mr. Kurzweil, who is the prime inventor of the reading machine, will demonstrate it.

Mr. Kurzweil. Mr. Chairman, I have placed reading material on the machine which I think is appropriate. To operate the machine, I press the page button. You may notice a small camera going back and forth; that is looking for the first line of print on the page.

This is the Kurzweil reading machine for the blind reading from a printed page. It is being demonstrated today before the United States Senate Subcommittee on the Handicapped, whose chairman is Senator Jennings Randolph from the State of West Virginia. The Kurzweil Reading Machine will assist blind men and women to gain greater opportunities in education and employment.

Mr. Kurzweil. The speech takes a little bit of getting used to. Within a few hours of exposure users of the machine are able to understand the material on the first hearing. There are about 30 user controls that enable a user to take an active role in the reading process. We believe that reading is an active, not a passive activity. There are different modes of reading. Users need the ability to skim some passages quickly; read some passages extensively; reread certain passages; spell words that are difficult. The machine's user controls provide these capabilities. The spelling feature is particularly important, especially when a person is not used to the speech. I can, for example, recall some of the words that were read just now, and have them spelled out.

"Senate—S-e-n-a-t-e; subcommittee—s-u-b-c-o-m-m-i-t-t-e-e; handicapped—h-a-n-d-i-c-a-p-p-e-d.

Mr. Unger. We will give another demonstration shortly.

Senator Randolph. As you know, Mr. Unger, I am a believer in creativity, innovation, and resourcefulness. I often think in these days about what Abraham Lincoln said, "We must think anew; we must act anew, we must disenthrall ourselves."

I said a long time ago, we must constantly, through inventive genius, innovation, resourcefulness, make new breakthroughs; that is very important.

Before you begin, Mr. Unger, I want to ask Mr. Kurzweil, what is the cost of that machine if it is placed in a certain reading center in Massachusetts or West Virginia?

Mr. Kurzweil. That is usually the first question that people ask. Like any experimental machine that is made in small quantities, and made essentially by hand, the cost is now high, about $50,000. But we expect that within 5 years the price will come into the individual price range so that if an individual person wants a machine, he will be able to afford it. Within 5 years it will be around $5,000—or in the $5,000 to $10,000 price range. The price will come down for two reasons. One is the classical reason of the efficiency of large scale production; the second is that the machine fortunately is comprised of solid state digital electronics, which each year get cheaper and cheaper. This process of price reduction will not stop, but will continue indefinitely. Eventually it will be very easily affordable by individual persons who need the machine.

Prior to that time the machine will be in libraries and institutions, in multiuser situations, where more than one person can share the machine.

Senator Randolph. And you look upon the price range as one that is not prohibitive; is that correct?

Mr. Kurzweil. Yes. In the next few years the price will be $20,000 to $30,000, and the machine will be able to be shared by 10 to 20 persons quite effectively, we are doing that right now in schools for the blind, they are sharing the machine; and accomplishing a good deal of reading that they need for their studies.

Shared in this way, we feel that even at the present time it is an economical device for multiuser situations. The goal of the project is, however, to provide the machine to individuals, to anybody who wants it, at a price they can afford.

Senator Randolph. By and large I think that such a program as you have demonstrated is practical. It is not just an expenditure, it is an investment that we have to think of. I think it will pay a dividend not only for the blind but for all of us. Obviously, the blind will derive a direct benefit because they will be able to fit themselves more closely into a productive society, but it seems just as obvious that such an occurrence will benefit the entire society. That is a dollar well spent to me. Many times I have seen people back away from something in the beginning because the cost of the pilot project seemed exorbitant. But, if you think beyond the first few months, or even the first few years, you realize that the funding, either at local, State, or Federal levels, is really rather inexpensive; do you agree?

Mr. Kurzweil. Yes, Mr. Chairman. I agree very much. The purpose of these early programs is to gain a great deal of user experience in the field, produce the first few machines to demonstrate that they work, and do the research that will result in an inexpensive machine. In this early stage, it is certainly a necessary component of the final goal, that the machine be widely disseminated.

Senator Randolph. Perhaps I am getting nostalgic, but I remember in 1936, when I was in the House of Representatives, testimony of the then Postmaster General on the legislation that was to become the Randolph-Sheppard Act. He said, "it is very fine to be compassionate and understanding, but we have to be practical. Now, the blind cannot operate these facilities and serve the public."

I said to him, "Let us give them a chance; they can be trained to do these jobs." And now, in the year of 1977 the doubters are the believers because we have today approximately 3,800 blind persons who are operating these facilities. In the past year they have had an average income of over $9,000. They have also in the last 12 months sold, in articles and items the public was buying, $141 million. I think this is testimony, constantly, to the ability of the blind, that they accommodate themselves to more productivity.

You are not giving them a handout; you are giving them a helping hand to do the job.

Now, Mr. Unger, that was too long, but I look back over those "doubters" in the years past, and today I see the blind operating facilities in Federal, State, and local buildings all across the country. Industry picked up the idea; commerce picked it up, and the success of the program is evident to everyone. It is a testimonial to people. Your machine is a people-oriented machine, although it is a very delicate piece of machinery, and you believe it can be of great significance in improving opportunities for the blind.

Mr. KURZWEIL. I certainly agree with that, Senator, that blind persons can lead full and productive lives. What we hope to accomplish with our project is to remove perhaps the last significant barrier, their inability to read ordinary print. With that barrier eliminated, I think there should be no limitations at all on what blind people can accomplish.

Senator RANDOLPH. Mr. Unger, would you identify yourself, give your full name and position for the record?

Mr. UNGER. Thank you, Mr. Chairman.

My name is Barry Unger, and I am executive vice president of Kurzweil Computer Products and also a lecturer in management at Metropolitan College of Boston University. Co-testifying with me is Raymond C. Kurzweil, president of Kurzweil Computer Products and the inventor of the Kurzweil reading machine. Also, I would like to say, with us today is Allen Becker, our chief engineer.

Senator RANDOLPH. Where is Allen?

[Mr. Becker stood up.]

Mr. UNGER. He helped us demonstrate the machine.

I would like to thank you for your kind and eloquent words, Mr. Chairman, and for your support and encouragement, and that of your staff, especially Mrs. Patria Forsythe, staff director, and Betty Griffin; it has meant much to us.

Also, we would like to acknowledge the extensive help of our own legislative representatives: Senator Edward Kennedy, a member of your committee; Senator Edward Brooke; and Representative Thomas P. O'Neil.

In the very limited time we have, we would like to once again demonstrate the Kurzweil reading machine; talk about its significance for blind people; and then discuss the role consumers have played in the development and continuing refinement of the machine.

The machine converts ordinary printed materials rapidly into spoken English at approximately 150 words per minute, tracking automatically from one line to the next. The system reads books, letters, reports, memorandums, and so on, in most common styles and sizes of type and thus allows blind and visually handicapped persons to read ordinary printed material rapidly, with minimal training required, and without fatigue.

Before we demonstrate the machine again, I would like to say a few words about its origin. Although the final design of the machine has been tailored to the expressed needs of blind people, it began not as an aid for the blind, but as a "solution in search of a problem." As an undergraduate at MIT in the late 1960's Mr. Kurzweil developed unique mathematical approaches as part of his scientific interest in the field of pattern recognition. Efforts were then made to look at how the advances that had emerged after several years of theoretical work might be applied. The new technology—low-cost, high-level property extraction of multifont characters of letters—seemed appropriate to the needs of blind people to read efficiently the great variety of type styles seen in ordinary inkprint books, typewritten letters, and other printed communication. At this time, around 1973, therefore, the reading needs of the blind were studied through review of the literature and through discussions with potential consumers—rehabilitation and education professionals and blind persons. This interaction with the needs of consumers guided the development of the reading machine in the years 1973–76, culminating in the production of reliable field models.

Now Ray Kurzweil will demonstrate the device again.

Mr. KURZWEIL. Thank you, Mr. Chairman; and thank you, Barry.

Before I demonstrate the machine again, I would like to point out that the speech output requires a small amount of familiarization. Our experience thus far indicates strongly that virtually everyone attains a high degree of comprehension after several hours of exposure. Without any exposure, listeners vary in their ability to comprehend, although some people can understand it with little or no experience. A study completed last spring with students at the Perkins School for the Blind by Prof. Martin Whiteman, of Columbia Universilty, has found that within a few hours of exposure to the machine, blind students are able to understand the machine's synthetic voice about as well as natural speech.

The user operates the device by placing printed material face down on the glass plate which forms the top surface of the scanning unit. He then presses the "page" button on the control panel, and listens to the synthetic speech produced as an electronic camera scans the page and transmits its image to a minicomputer housed within the device. The computer separates the image into discreet character forms, recognizes the letters, groups the letters into words, computes the pronunciation of each word, and then produces the speech sounds associated with each phoneme.

Senator RANDOLPH. It does not have a southern drawl.

Mr. KURZWEIL. We are working on that model for West Virginia. [Laughter.]

Pronunciation of words is accomplished through the use of over a thousand linguistic rules stored in the computer's memory. Additionally, a stress contour over each sentence is computed by a small set of syntactical rules.

The reading machine thus performs four simultaneous processes: scanning, recognition of letters, grapheme to phoneme conversion—that means determining how to pronounce each word—and the production of the actual speech sounds, at the normal speech rate of about 150 words per minute.

An important feature, I would like to point out, is its user controls. For everyone, sighted or blind, reading is properly an active rather than a passive process. One rereads interesting or difficult passages, pauses at unfamiliar words, skims the page to find material of particular interest, and so on. The Kurzweil reading machine enables the user to accomplish these different forms of reading by the use of about 30 keyboard-mounted buttons.

The reader can for example, if he wishes, find footnotes and then return to the same location in the text where the footnote was originally referenced. These many buttons may at first seem complicated. The physical configuration of the buttons, however, is designed to allow the novice user easy access to the 5 or 10 buttons most important to his reading. In this way, it is anticipated that a user will gradually build his confidence and facility with the machine, while being able to perform basic reading functions right from the start.

I will put some different material on the machine; this is nothing special but you may recognize it.

I am pressing the page button, and again it is looking for the first line on the page.

[Machine reading from printed record of recent Senate confirmation hearings.]

> **Ray Marshall, Secretary of Labor designate. Doctor Ray Marshall was selected to be the nation's 16th Secretary of Labor by President-elect Jimmy Carter on December 21. His appointment is subject to Senate confirmation. As Secretary, Marshall will be responsible for carrying out the department's mission, which is to foster, promote, and develop the welfare of the wage earners of the United States. To improve their working conditions, and to advance their opportunities for profitable employment. In doing this, he will administer laws and programs in such areas as employment standards, job safety and health, employment and training, labor statistics, labor management relations, and other matters affecting the nation's work force. Dr. Marshall has been director for the Center for the Study of Human Resources at the University of Texas since 1970 and is a professor of economics there.**

Mr. KURZWEIL. The need for access to ordinary inkprint is considerable. Of the approximately 40,000 new book titles printed each year, only about 350 are put into braille by the Library of Congress and only about 900 are taped. Professional materials such as textbooks, journals, correspondence, and memorandums, are even less available in braille or talking books. Current devices, called direct translation reading aids, require considerable training, and provide generally slow reading speeds on the order of 10 to 40 words per minute.

By allowing easy access to the ordinary inkprint page, the Kurzweil reading machine has a potentially significant impact on educational and vocational opportunities for blind persons. The device will allow blind students to read most of the same texts and printed materials as their sighted peers. For blind professionals—such as lawyers, counselors, educators, administrators—the reading machine will allow access to journals, memorandums, and reference materials that are vital to the work they perform and to updating their professional skills. For all working blind people, we hope it will mean more varied and more rewarding employment opportunities.

While the initial development of the reading machine has been completed, further improvements are possible. Reading is a complex activity. Print specifications differ significantly among printed documents, varying in the style and size of type, the grade of paper and ink, the quality of print, and the page format. The purpose of reading may also vary, ranging from skimming to intensive study. Extensive user experience in the field will enable us to optimize the machine's ability to handle the largest possible diversity of reading situations.

An important design goal of ours has been to produce a high-performance, rapid, easy-to-use reading machine for the blind which would not become obsolete. With continuing rapid advances in digital component fabrication techniques, the problem of a design's becoming obsolete by the time it is completed is a serious one. We have handled this problem by implementing the intelligence of the system—and by intelligence we mean any information-handling process likely to change—in software. The software can, and will, be modified over time as the system continues to be shaken down, and as further improvements are implemented. Software changes, as they are developed, can be distributed to all units in the field in the form of software update tapes, which are then loaded into each reading machine using the digital cassette tape drive provided with each unit. In this way, even the first set of reading machines will be able to take advantage of improvements such as the development of other languages. Special character sets—mathematical symbols, for example—can also be introduced to all units in the field in this way, again without requiring hardware modification. A final advantage is that we can take advantage of more efficient components for future production runs—new micro-CPU's, new memory chips—as they are introduced without having to redesign the heart of our technology, which is primarily in software. Technology that was not likely to require change, such as the scanning system, image enhancement circuitry, and other subsystems, were implemented in hardware.

To guide this continuing refinement of the machine feedback is currently being collected under several programs from those who will be affected by the machine—blind children and adults, teachers, and rehabilitation professionals. Barry Unger will now describe these programs.

Senator RANDOLPH. Before you go on, Barry, I want to break in at this point. How long did it take you from the beginning of your work to this completed machine you have here?

Mr. KURZWEIL. The project began about 10 years ago.

Senator RANDOLPH. How old were you then, Ray?

Mr. KURZWEIL. Nineteen, I believe.

Senator RANDOLPH. How old were you, Barry?

Mr. UNGER. Nineteen, also.

Senator RANDOLPH. That is good. I offered a constitutional amendment for 18-year-olds to vote. [Laughter.]

I think it is great that you apply yourself here. It has been difficult to do this, but what was the most difficult job?

Mr. KURTZWEIL. There were a lot of challenges in the development of the device. There were challenges in terms of organizing an organization of people in the various fields required to build this machine. I want to give credit to a large number of people on our staff, people that we have worked with on your staff, and other persons in Washington, who helped us to put this program together.

In terms of technical challenges, there were two aspects to the machine that required new development. One was the computation of its speech, the speech output; the other was the recognition of printed letters, dealing with a printed page itself. Now, it is commonly thought that the speech output or the fact that the machine talks is the most interesting and therefore was the most difficult part of is development. While it did require considerable development in the speech area, the most difficult part of its development that we undertook in the last 8 years was the recognition of printed letters. Printed material differs tremendously in a wide range of specifications. Even well-printed material may contain printing errors, and dealing with all these vagaries of print was by far the biggest challenge in the technical development of the machine.

Mr. **Unger.** Over 20 machines are currently being constructed, to be placed in the field in the next 9 months.

Over time we plan to place a much greater number of machines in the field and develop a full system of support activities for the optimal use of the machine. For example, we want to develop training and self-training guides for users.

We want to learn how the machine fits into educational programs for children and rehabilitation programs for adults. We want to find out what additional new skills have to be taught as a result of the opportunities the machine opens up. For example, now that blind children can read ordinary printed materials, new skills in using regular ink-print libraries and book stores may need to be taught.

A current program with the Department of Health, Education, and Welfare includes tests sponsored by the Bureau of Education for the Handicapped—BEH—and the Rehabilitation Services Administration—RSA—both in that Department.

The BEH program is focusing on the use of the reading machine in educational situations, particularly with school age blind children. Data is being collected concerning the use of the machine, and the machine will be improved on the basis of this feedback from blind children, their parents, and their teachers. The first placement, as Ray mentioned, under this program, was made this fall at the Perkins School for the Blind in Watertown, Mass.

Senator **Randolph.** I visited that school, and they do tremendous work there, the staff, all of them.

Mr. **Unger.** We are very impressed with them, also.

Senator **Randolph.** Do you know the magazine that they publish for people throughout the country?

Mr. **Unger.** I am sorry, I did not hear you.

Senator **Randolph.** The magazine that they publish; do you know it?

Mr. **Unger.** Yes.

Senator **Randolph.** It is very informative.

Mr. **Unger.** Yes, we are very pleased with our contact with the Perkins School.

A further placement, under the BEH program, will soon be made at the Boston school system and then another at the West Virginia School for the Deaf and Blind at Romney, W. Va.

The RSA program will focus on the use of the reading machine by blind adults in vocational situations and will provide feedback from blind consumers and rehabilitation specialists. The first RSA placement will be made next month at the West Virginia Rehabilitation Center in Institute, W. Va. Additional placements will then be made at Arkansas Enterprises for the Blind and the Iowa Commission for the Blind.

Independent evaluation will be provided for the RSA by Dr. Lawrence Scadden, research director of the Smith-Kettlewell Institute of Visual Sciences and president of the Northern California chapter of the American Association of Workers for the Blind. I also would like to point out that by virtue of West Virginia's participation in the Appalachian Regional Commission the machine which is being placed in Institute, W. Va., will also be accessible to the other States in the Appalachian region.

Senator RANDOLPH. That is good information for us to have. When you speak about the Appalachian Regional Commission's program, there is a feeling among many people that that is only West Virginia. Now, there are 13 States encompassed in that very worthwhile program, bringing results to people. The ARC programs go into New York State, and down across the mountains into Georgia, for example, and Alabama.

I just wanted to indicate that the ARC program with which you are working in this area is a very valuable program, as are all the other programs that are being developed there.

Mr. UNGER. Veterans Administration tests of the machine have also been organized. These tests are at the request of and in cooperation with the Blinded Veterans Association, headed by Mr. Jerry Monroe. An initial placement under this program will be made at the Hynes Veterans' Administration Hospital in Chicago.

Additionally, the Massachusetts Commission for the Blind has ordered a test unit to be used by blind staff in their headquarters office and this too will provide valuable information on the usage of the machine.

A comprehensive human engineering consumer-based study of the reading machine has been organized in collaboration with the National Federation of the Blind, whose Washington representative, Mr. James Gashel, spoke to you yesterday, and which is headed by Dr. Kenneth Jernigan.

In light of the purposes of this hearing, this collaboration is of particular interest.

The National Federation of the Blind is the largest organization of blind people and has for the last 3 years advised the company on the development of the machine. As part of the current study, the NFB is placing six reading machines in a variety of user situations—in the office of a blind executive, a lawyer, a lawmaker, an engineer or scientists, or in a rehabilitation center, and so on. On the basis of this experience and suggestions that result from use of the machine, the NFB will provide guidance on ways in which the machine can be made more responsive to the needs of blind readers, through such things as additional user controls and buttons and improved physical configuration of the reading machine.

The program has been designed and is being implemented and directed by the NFB's own scientists and engineers. The program is incorporating a new concept of consumer involvement in the design process, and the funds for this program have been contributed by five major foundations across the country: the Sloan, Hearst, Fleischman, Pew Memorial Trust, and Amoco Foundations.

Initial testing of the first machine in this program by Michael B. Hingson of the NFB's staff began several months ago. The feedback from this program has already led to many valuable improvements to the machine. For example, the NFB stressed to us the need to be able to read photocopied materials such as xerox copies in a work situation. As a result of their input, a contrast enhancement feature was implemented to accomplish this. Other examples of suggested improvements that have been implemented are the capability to read italic and the improved handling of columnated page formats such as those found in magazines.

Because of the programability feature of the reading machine, when such improvements are made, they are easily implemented in models already out in the field. This is simply done by sending older sites a small cassette tape incorporating the computer programs for the improvements.

In closing we would like to say that we believe it is important for designers and consumers to involve each other in this kind of intensive way, and thus to increase the relevance and quality of new technology for the disabled.

Mr. Chairman, we have tried to keep our testimony brief, but we brought along a more detailed written statement, and we would like to request that it be added to the record of the hearing.

Senator RANDOLPH. Barry, all that you have brought to us in written form will be considered as part of the published record.

Mr. UNGER. Thank you.

Senator RANDOLPH. We understand you have given us a summary, and we want the record to be complete. All materials will be included.

Mr. UNGER. Yes, sir. One thing I wanted to say, in our visits to the West Virginia Rehabilitation Center, and Charleston, nearby, we really found a lot of exciting educational activities happening in that area.

Senator RANDOLPH. Thank you very, very much. We have many problems, and we have them all over the country; but we do not just say, "We cannot do it." We must say, "We can do it"—and you are helping us to do it. To have young minds and hearts involved in trying to solve some of these problems is truly inspiring—and I am not speaking in pleasantries; I am speaking what I feel. I believe in what you are doing. You may have these difficult periods of development, and people may not respond as you would like for them to. But you keep at it, and we will in this subcommittee, and I hope in the Senate, in the Congress, we will do our job, too.

I do not always turn to the person who does the most work, but Pat, why not take a moment—our staff director on the Subcommittee for the Handicapped—take a moment and say how you feel. She did not know I was doing that, it was not prearranged.

Mrs. FORSYTH. Well, I think of all the people who come around, you have really been exciting, and it has been an inspiration for some of us people working with this. You are encouraging us to do these things. I think this is really one of the exciting things.

Senator RANDOLPH. Thank you very much.

Now, does that sort of wind it up for the morning?

Mr. UNGER. Yes, sir.

Senator RANDOLPH. Thank you, Ray; thank you, Barry. We will be watching you, and we will be working with you. Thank you very much.

[Applause.]

[The prepared statement and biographical sketches of Mr. Unger and Mr. Kurzweil and additional material referred to follow:]

THE KURZWEIL READING MACHINE, WORLD'S FIRST PRINT-TO-SPEECH READING MACHINE FOR THE BLIND

Testimony and Demonstration by Kurzweil Computer Products, Inc.
to the Senate Subcommittee on the Handicapped
February 8, 1977

Thank you, Mr. Chairman. My name is Barry Unger and I am Executive Vice-President of Kurzweil Computer Products and a lecturer in management at Metropolitan College of Boston University. Co-testifying with me is Raymond C. Kurzweil, President of Kurzweil Computer Products and the inventor of the Kurzweil Reading Machine.

We're pleased to be here this morning and we would like to thank the subcommittee for inviting us. Your support and encouragement, and that of your staff, including Mrs. Patria Forsythe and Ms. Betty Griffin, has meant much to us. In the limited time we have, we would like to demonstrate the Kurzweil Reading Machine, talk about its significance for blind people, and then discuss the role consumers have played in the development and continuing refinement of the machine.

The Kurzweil Reading Machine converts ordinary printed materials (books, correspondence, memoranda, etc.) rapidly into spoken English at approximately 150 words per minute on a multi-line basis, tracking automatically from one line to the next. The system reads books, letters, reports, memoranda, and so on, in most common styles and sizes of type and thus allows blind and visually handicapped persons to read ordinary printed material rapidly, with minimal training required, and without fatigue.

Before we demonstrate the machine, we would like to say a few words about its origin. Although the final design of the machine has been tailored to the express needs of blind people, it began not as an aid for the blind but as a solution in search of a problem. As an undergraduate at M.I.T. in the late 1960s, Mr. Kurzweil developed unique mathematical approaches as part of his scientific interest in the field of pattern recognition. Efforts were then made to look at how the advances that had emerged after several years of theoretical work might be applied. The new technology – involving low-cost, high-level property extraction of multifont characters or letters – seemed appropriate to the needs of blind people to read efficiently the great variety of typestyles seen in ordinary inkprint books, typewritten letters, and other printed communication. At this time, around 1973, the reading needs of the blind were studied through review of the literature and through discussions with potential consumers – rehabilitation and education professionals and blind persons. This interaction guided the development of the reading machine in the years 1973-1976, culminating in the production of reliable field models.

Now, Mr. Kurzweil will demonstrate the device that emerged and discuss its significance.

Before I demonstrate the machine, I would like to point out that the speech output requires a small amount of familiarization. Our experience thus far indicates strongly that virtually everyone attains a high degree of comprehension after several hours of exposure. Without any exposure, listeners vary in their ability to comprehend, although some people can understand it with little or no experience. A study completed last spring with students at the Perkins School for the Blind by Professor Martin Whiteman of Columbia University has found that within a few hours of exposure to the machine, blind students are able to understand the machine's synthetic voice about as well as natural speech.

The user operates the device by placing printed material face down on the glass plate which forms the top surface of the scanning unit. He then presses the 'Page' button on the control panel, and listens to the synthetic speech produced as an electronic camera scans the page and transmits its image to a minicomputer housed within the device. The computer separates the images into discrete character forms, recognizes the letters, groups the letters into words, computes the pronunciation of each word, and then produces the speech sounds associated with each phoneme. Pronunciation of words is accomplished through the use of over a thousand linguistic rules stored in the computer's memory. Additionally, a stress contour over each sentence is computed by a small set of syntactical rules.

The reading machine thus performs four simultaneous processes: scanning, character recognition, grapheme to phoneme conversion, and production of speech sounds, at the normal speech rate of about 150 words per minute.

An important feature of the reading machine is its user controls. For everyone sighted or blind, reading is properly an active rather than a passive process; one re-reads interesting or difficult passages, pauses at unfamiliar words, skims the page to find material of particular interest, and so on. The Kurzweil Reading Machine is operated by the user with a set of keyboard-mounted buttons.

These allow the user the option of taking a very active role in the reading process. He can at any time temporarily halt the machine, cause it to back up to hear a passage of particular interest, locate words and have them spelled out, cause the machine to skim passages, adjust the reading speed or pitch, find footnotes and then return to the same location in the text where the footnote was originally referenced, as well as other control functions.

This is only an overview of the control options available to the user; our keyboard presently includes thirty buttons.

This many buttons may at first seem complicated. The physical configuration of the buttons, however, is designed to allow the novice user easy access to the five or ten buttons most important to his reading. In this way, it is anticipated that a user will gradually build his confidence and facility with the machine, while being able to perform basic reading functions right from the start.

It is commonly thought that the hard part in the development of a reading machine is the linguistics or speech output. In fact, while the linguistic part of a reading machine did require significant development, the truly difficult part is recognizing letters in all of the different styles and sizes of type commonly found in printed material.

(Demonstration of the Kurzweil Reading Machine)

The need for access to ordinary inkprint is considerable. Of the approximately 40,000 new book titles printed each year, only about 350 are put into braille by the Library of Congress and only about 900 are taped. Professional materials such as textbooks, journals, correspondence, and memoranda, are even less available in braille or talking book. Current devices, called Direct Translation Reading Aids, require considerable training, and provide generally slow reading speeds on the order of ten to forty words per minute.

By allowing easy access to the ordinary inkprint page, the Kurzweil Reading Machine has a potentially significant impact on educational and vocational opportunities for blind persons. The device will allow blind students to read most of the same texts and printed materials as their sighted peers. For blind professionals (such as lawyers, counselors, educators, administrators) the reading machine will allow access to journals, memoranda, and reference materials that are vital to the work they perform and to updating their professional skills. For all working blind people, we hope it will mean more varied and more rewarding employment opportunities.

An important design goal of ours has been to produce a high-performance (rapid, easy-to-use) reading machine for the blind which would not become obsolete. With continuing rapid advances in digital component fabrication techniques, the problem of a design's becoming obsolete by the time it is completed is a serious one. We have handled this problem by implementing the intelligence of the system – and by intelligence we mean any information-handling process likely to change – in software. The software can, and will, be modified over time as the system continues to be shaken down, and as further improvements are implemented. Software changes, as they are developed, can be distributed to all units in the field in the form of software update tapes, which are then loaded into each reading machine using the digital cassette tape drive provided with each unit. In this way, even the first set of reading machines will be able to take advantage of improvements such as the development of other languages. Special character sets (mathematical symbols, for example) can also be introduced to all units in the field in this way, again without requiring hardware modification. A final advantage is that we can take advantage of more efficient components for future production runs – new micro-CPU's, new memory chips – as they are introduced without having to redesign the heart of our technology, which is primarily in software. Technology that was not likely to require change, such as the scanning system, image enhancement circuitry, and other subsystems, were implemented in hardware.

While the initial development of the reading machine has been completed, further improvements are possible. Reading is a complex activity. Print specifications differ significantly among printed documents, varying in the style and size of type, the grade of paper and ink, the quality of print, and the page format. The purpose of reading may also vary, ranging from skimming to intensive study. Extensive user experience in the field will enable us to optimize the machine's ability to handle the largest possible diversity of reading situations.

To guide this continuing refinement, feedback is currently being collected under several programs from those who will be affected by the machine - blind children and adults, teachers, and rehabilitation professionals. Barry Unger will now describe these programs.

A program with the Department of Health, Education and Welfare includes tests sponsored by the Bureau of Education for the Handicapped (BEH) and the Rehabilitation Services Administration (RSA), both in that department.

The BEH program is focusing on the use of the reading machine in educational situations, particularly with school-age blind children. Data is being collected concerning the use of the machine, and the machine will be improved on the basis of this feedback from blind children, their parents, and their teachers. The first placement under the BEH program was made this fall at the Perkins School for the Blind in Watertown, Massachusetts.

The RSA program will focus on the use of the reading machine by blind adults in vocational situations and will provide feedback from blind consumers and rehabilitation specialists. The first RSA placement will be made shortly at the West Virginia Rehabilitation Center. Additional placements will then be made at Arkansas Enterprises for the Blind, and the Iowa Commission for the Blind.

Independent evaluation will be provided for the RSA by Dr. Lawrence Scadden, research director of the Smith-Kettlewell Institute of Visual Sciences and president of the Northern California chapter of the American Association of Workers for the Blind.

Veterans Administration tests of the machine have also been organized. These tests are at the request of and in cooperation with the Blinded Veterans Association, headed by Mr. Jerry Monroe. An initial placement will be made at the Hynes VA Hospital in Chicago.

Additionally, the Massachusetts Commission for the Blind has ordered a test unit to be used by blind staff in their headquarters office, and this too will provide valuable information on the usage of the machine.

A comprehensive human engineering consumer-based study of the reading machine has been organized in collaboration with the National Federation of the Blind, whose Washington representative, Mr. James Gashel, spoke to you yesterday, and which is headed by Dr. Kenneth Jernigan.

In light of the purposes of this hearing, this collaboration is of particular interest.

The NFB is the largest organization of blind people and has for the last three years advised the company on the development of the machine. As part of the current study, the NFB is placing six reading machines in a variety of user situations - in the office of a blind executive, a lawyer, an engineer or scientist, or in a rehabilitation center, and so on. On the basis of this experience and suggestions that result from use of the machine, the NFB will provide guidance on ways in which the machine can be made more responsive to the needs of blind readers, through such things as additional user controls and improved physical configuration. This will be accomplished through machine placement, evaluation by NFB staff, and extensive consultation with the company's development staff. The program has been designed and is being implemented and directed by the NFB's own scientists and engineers. The funds for this program incorporating a new concept of consumer involvement in the design process, have been contributed by five major foundations across the country: the Sloan, Hearst, Fleischmann, Pew Memorial Trust and Amoco Foundations.

Testing of the reading machine by Michael B. Hingson of the NFB's staff began several months ago in Boston.

We believe that it is important for designers and consumers to involve each other in this kind of intensive way, and thus increase the relevance and quality of new technology for the disabled.

In closing, we would like to thank the many persons who have made significant contributions to the development of the reading machine. Like most large projects, the efforts of many persons working together in a variety of fields has been required.

At Kurzweil Computer Products, Inc., this has included, in addition to those testifying today: Mr. Aaron Kleiner, Executive Vice-President; Mr. Allen Becker, Chief Engineer; Mr. Harry George, Controller; Mr. David Boucher, Director of Production and Purchasing; Mr. Richard Brown, Head of the Software Development Team; Mr. Randall Stern, Software Designer; Mr. Stephen Pelletier, Software Designer; Mr. Gregg Mott, Software Designer; Mr. Robert Walton, Systems Designer; Mr. Jake Bogosian, Electrical Engineer; Ms. Bernice Broyde Shapiro, Senior Research Associate; Ms. Jane H.

Zellmann, Program Development Specialist; Ms. Joyce Meryl Holzman, Administrative Assistant; Ms. Susan Becker, Image Collector; Mr. Edward Clark, Production Designer; Mr. Irving Kalikow, Mechanical Designer; Mr. George Random, Optical Consultant; Mr. Arthur D. Larson, Financial Advisor; Dr. Martin Whiteman, Director of Testing; Martin Schneider, Information Requests; Aleah Kleiner, General Assistant.

The company's project officers, Mr. John Davis and Dr. Allen Dittmann of the Bureau of Education for the Handicapped (BEH), and Mr. Richard LeClair of the Rehabilitation Services Administration (RSA), have provided a great deal of specific assistance in many areas. The following persons have also worked closely with the company, and have assisted the project in a variety of ways: Dr. Max Mueller (BEH), Ms. Josephine Taylor (BEH), Dr. Edwin Martin (BEH), Dr. Joseph Traub (RSA), Dr. James Garrett (RSA), Dr. Douglas McFarland (RSA), Mr. George Magers (RSA), Dr. Andrew Adams (RSA), Dr. Eugene Murphy (VA), Mr. Howard Freiberger (VA), Dr. Newcomb (VA), Dr. Richard Evenson (Library of Congress), and Dr. Frank Kurt Cylke (Library of Congress).

The following persons have worked closely with the company on the unique consumer testing program of the reading machine being conducted by the National Federation of the Blind: Dr. Kenneth Jernigan, President; Mr. James Gashel, Chief, Washington Office; Mr. Curtis Willoughby; and Mr. Michael B. Hingson.

As we mentioned at the beginning of our testimony, your help, Senator Randolph, and that of the staff of the Senate Subcommittee on the Handicapped has been invaluable. Also, we would like to acknowledge the extensive help of our legislative representatives Senator Edward Kennedy, Senator Edward Brooke, and Representative Thomas P. O'Neill.

We would also like to acknowledge the interest and assistance of Jerry R. Monroe, National President of the Blinded Veterans Association.

An advisory group has been assisting the company on issues concerning priorities for development and evaluation efforts, machine modifications, evaluation procedures and teaching methods. The advisory group includes representatives of the blind, professionals in education of blind children, professionals in rehabilitation, rehabilitation engineers, experts on testing, and experts in the area of reading for the blind. The members are Mr. John P. Mungovan, former Commissioner, Massachusetts Commission for the Blind; Mr. Carl J. Davis, Head of the Department of Psychology and Guidance, Perkins School for the Blind; Dr. Derek Rowell, Director, M.I.T. Sensory Aids Evaluation and Development Center; Mr. Jerry Monroe, National President, Blinded Veterans Association; Dr. Martha Ross Redden, Director, Project on the Handicapped in Science, AAAS; Ms. Mary Keefe, Supervisor, Vision Resources, Boston Public Schools; Dr. Hadi Madjid, Senior Economist, Arthur D. Little, Inc., member of the Board of Directors, Carroll Rehabilitation Center for the Blind, Trustee, Boston Biomedical Research Institute; Dr. Leonard Diller, Chief, Behavioral Science, Institute of Rehabilitation Medicine, New York University Medical Center, Professor of Clinical Rehabilitation, New York University; Dr. Carson Nowlan, Vice-President, American Printing House for the Blind; Ms. Sharon R. Strzalkowski, Former Research Assistant, Office for Handicapped Individuals. The National Federation of the Blind has agreed to serve as an advisory organization, with James Gashel, Chief, Washington Office, as liaison. Mr. John Davis (BEH) and Mr. George Magers (RSA) have agreed to serve as ex-officio members of the advisory group.

Mr. Chairman, we have brought along a somewhat more detailed written statement, and we respectfully request that it be added to the records of this hearing.

KURZWEIL COMPUTER PRODUCTS, INC.

Introduction to the Kurzweil Reading Machine

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68 Rogers Street, Cambridge, Mass. 02142 617-864-4700

THE KURZWEIL READING MACHINE, A MULTI-FONT FULL WORD READING MACHINE FOR THE BLIND

Kurzweil Computer Products, Inc.

This paper presents a technical overview of the different subsystems of the Kurzweil Reading Machine - the nature of the information processed by each subsystem, the type of transformations performed, and the ways in which the user directs the machine in aiding his reading. Preliminary tests of the reading machine have been performed with the help of blind secondary school students, focusing on the intelligibility of its synthetic speech output, and the results of these tests are also presented.

The Kurzweil Reading Machine converts print to speech, and is designed as a reading prosthetic aid for the blind and visually handicapped. The system handles ordinary printed material--books, letters, reports, memoranda, etc.--in most common styles and sizes of type. The output produced is a synthetic voice using full word English speech. The user operates the device by placing printed material face down on the glass plate which forms the top surface of the scanning unit; he then presses the 'Page' button on the control panel, and listens to the synthetic speech produced as an electronic camera scans the page and transmits its image to a minicomputer housed within the device. The computer separates the image into discrete character forms, recognizes the letters, groups the letters into words, computes the pronunciation of each word, and then produces the speech sounds associated with each phoneme. The machine operates at normal speech rates, about 150 words per minute.

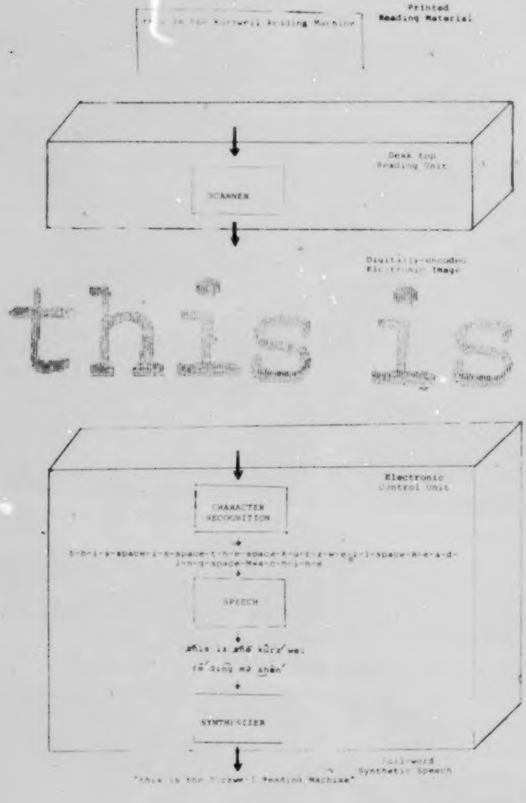
The Scanner

The first subsystem of interest is the scanner. A high-contrast electronic image of the page to be read is generated by the scanner, which includes a linear photosensor array at the focal plane of a camera mounted on an X-Y mover, which moves the camera in a plane parallel to the plane of the text. The photosensor array is perpendicular to the direction of text lines; thus a single scan across a page results in an electronic image covering a strip of the page which includes several text lines. Immediately after the user presses the 'Page' button, the scanner moves to the limit of its travel in the direction of the top of the page, and begins to search for the first text line. When the first line is found, the camera tracks that line and moves automatically down to the following lines, tracking each in turn. Scanner efficiency is maximized by scanning left-to-right and also right-to-left; material scanned right-to-left is reversed by the computer before the output stage.

Character Recognition

Scanner output, which can be imagined as a simple two-dimensional matrix of black and white points, is processed by the character recognition system, beginning with the isolation of each contiguous area of print in the page image. Each contiguous print area is presumed to be a single character, with the exception of certain special cases requiring additional processing--e.g., touching or fragmented characters, and dots associated with particular characters. Each individual character is analyzed by a set of feature extraction routines. The features, or properties, extracted are those that have been found to be relatively invariant for the same character with respect to the types of changes that occur across different typestyles. These properties are basically geometric--line segments, concavities, loops, loop extensions, and the positional relation-

Figure 1


This is the Kurzweil Reading Machine
Printed Reading Material
Desk top Reading Unit
SCANNER
Digitally-encoded Electronic Image
this is
Electronic Control Unit
CHARACTER RECOGNITION
t-h-i-s-space-i-s-space-t-h-e-space-K-u-r-z-w-e-i-l-space-R-e-a-d-i-n-g-space-M-a-c-h-i-n-e
SPEECH
this is the kurz'weil
re'ding ma shen'
SYNTHESIZER
Full-word Synthetic Speech
"this is the Kurzweil Reading Machine"

The SCANNER consists of a computer-controlled electronic camera below the glass plate on which reading material is placed. The camera converts the printed material into a digital signal for analysis by the computer in the electronic control unit.

The CHARACTER RECOGNITION subsystem analyzes the stream of signals from the SCANNER to isolate individual character forms, analyzes these character forms for shape properties (the presence of loops, concavities, line segments, etc.) as well as positional, size and contextual properties, and on the basis of these properties determines the identity of each character. This subsystem is designed to correctly identify upper-case letters, lower-case letters, numbers, special characters, punctuation and ligatures in all standard type-styles.

The SPEECH subsystem is responsible for analyzing the recognized character sequence to determine the proper sequence of speech sounds. It includes an analysis of intra-word stress assignment as well as a prosodic feature analysis to assign an appropriate stress contour across each sentence. These conversions are accomplished by a morphological breakdown (stripping off prefixes and suffixes), a phonetic rules program consisting of over 1,000 linguistic rules, an exception dictionary (for words not correctly handled by the phonetic rules) and a partial syntactical analysis of sentence structure for inter-word stress assignment.

The SYNTHESIZER, using control signals from the SPEECH subsystem, produces the actual sounds that comprise the synthetic speech output.

ships among these elements. The properties of a standard capital "A", for example, include a single loop and a single south-facing concavity. Once the properties have been extracted, they are compared to stored lists describing each character in the identification set (characters outside the identification set, that is, those characters not presently identified, include various special mathematical symbols and non-Latin alphabets, for example).

The output of this process is usually a final identification, although it is occasionally an ambiguity code indicating one of several possible final identifications based on contextual cues. In this case, the final identification is made by a special module called the "disambiguator", which analyzes positional and other contexual cues to "disambiguate" the output of the shape recognizer. An example is a single vertical bar. The shape recognizer output will indicate that this shape is (1) the lower-case letter "i" if there exists a dot above the character, (2) the lower-case letter "el" if there exists no dot and the character is in a letter context, or (3) the number "one" if there exists no dot and the character is in a number context.

The final step in character recognition is text line formation--that is, the collation of individual characters into words and punctuation to be analyzed by the speech generation system.

Speech Generation

The primary function of the speech generation system is to determine the proper pronunciation of each word--i.e., grapheme strings are converted to phoneme strings. This is accomplished by a set of over 1,000 phonetic rules supplemented by a dictionary of exceptional cases. First, prefixes and suffixes are stripped off by algorithms which reconstruct the root--"rating", for example, is converted to "rate"-"ing". The exception dictionary is checked for the resulting root. If the root has been entered into the dictionary, the dictionary phonemes are used; otherwise the root is passed to the phonetic rules module. Whether the rules module or the exception dictionary is used, the prefix and suffix, if any, are looked up in a special affix dictionary and properly appended to the root phoneme string.

Stress marks, which are modifiers tied to each phoneme in the form of relative pitch and volume parameters, are also generated by the exception dictionary and the phonetic rules for intra-word stress assignment. A stress contour over each sentence, for improved prosody, is computed by a set of primitive syntactical rules that look primarily for certain lexical cues indicating phrase boundaries. These rules range from the very simple:

> *If a word ends in a question mark or exclamation point, stress it. This generally gives the appropriate stress pattern to questions and exclamatory sentences.*

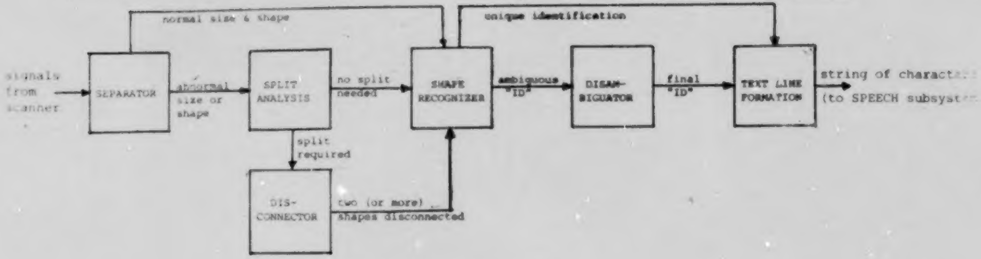
to the more complex:

> *Relative pronouns are stressed if the preceding word was not a relative pronoun ("that which is...").*

Rules of the second type utilize an internal dictionary of syntactic types, entirely distinct from the phonetic exception dictionary.

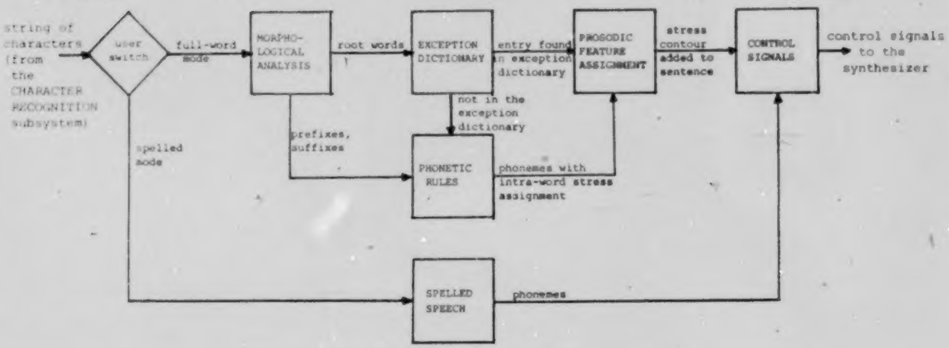
CHARACTER RECOGNITION

Figure 2


normal size & shape
unique identification
signals from scanner
SEPARATOR
abnormal size or shape
SPLIT ANALYSIS
no split needed
SHAPE RECOGNIZER
ambiguous "ID"
DISAM-BIGUATOR
final "ID"
TEXT LINE FORMATION
string of charact
(to SPEECH subsyst
split required
DIS-CONNECTOR
two (or more) shapes disconnected

SPEECH

Figure 3


string of characters (from the CHARACTER RECOGNITION subsystem)
user switch
full-word mode
MORPHO-LOGICAL ANALYSIS
root words
EXCEPTION DICTIONARY
entry found in exception dictionary
PROSODIC FEATURE ASSIGNMENT
stress contour added to sentence
CONTROL SIGNALS
control signals to the synthesizer
not in the exception dictionary
prefixes, suffixes
PHONETIC RULES
phonemes with intra-word stress assignment
spelled mode
SPELLED SPEECH
phonemes

The final step in speech generation is a conversion of the phoneme string into the speech waveform. This operation is performed by a hardware synthesizer, which is essentially a set of variable electronic filters designed to model the human vocal tract. Synthesizer output is amplified and transmitted to a speaker--and the machine "talks".

User Controls

For everyone, sighted or blind, reading is properly an active rather than passive process; one re-reads interesting or difficult passages, pauses at unfamiliar words, skims the page to find material of particular interest, and so on. The Kurzweil Reading Machine allows the user to interact actively with the text he is reading via the user controls, a set of keyboard-mounted buttons. When the 'Page' button is pressed, the scanner automatically finds the first line of text on the page and begins reading, continuing down the page until the 'Pause' button is pressed, at which point the scanner (and the speech output) is halted. Until 'Resume Scan' is pressed, the machine is in "pause mode". While in pause mode, the user may utilize buttons to manipulate the reading machine in several ways. He may read a single line or a single word, repeating as often as he wishes, and he may move forward through the text in line or word increments; he may have words spelled out rather than normally pronounced; he may "skim" the page, causing only the first few words in each line to be read until a point of interest is reached. If the user presses 'Set Mark', the computer will note the current scanner position; if at a later time he presses 'Go To Mark', the scanner will return to the Set Mark position. Using a keyed numeric input in conjunction with the Mark facility allows the user to mark and return to several different positions.

This is only an overview of the control options available to the user; our keyboard presently includes 30 buttons. The physical configuration, however, is designed to allow the novice user easy access to the five or ten buttons most important to his reading. Still, the favorite button of many inexperienced users will probably be the 'Operator' key; if the 'Operator' key is pressed immediately preceding the pressing of any other key, the machine will not perform the command associated with the second key, but rather will tell the user its function (by speaking the name of the key).

Preliminary Tests

Largely in order to aid in the design of an extensive testing program, preliminary tests of the machine were performed earlier this year under a contract with the Bureau of Education for the Handicapped in H.E.W. Seven secondary school students whose only disability was visual impairment, and who were of normal intelligence, were subjects for the preliminary study.

The study was structured as a comparison of the subjects' performances in decoding (that is, understanding single words in isolation) and comprehending (that is, understanding paragraph-length material) the reading machine's synthetic speech. The *Durrell Listening-Reading Series, Advanced Level* (for grades 7-9) was selected as the test instrument. Four sets of word-lists and paragraph-length passages, each of equal level of difficulty, interest value, and representativeness of vocabulary sample were presented to each student as follows:

1. Test using human speech.
2. Test using synthesized speech--subjects had no previous exposure to synthetic speech.
3. Test using synthesized speech after moderate practice.
4. Test using synthesized speech after more extensive practice.

Due to time limitations, no student received more than three hours total exposure to the synthetic speech before testing ended. Briefly, the results of the tests were as follows (using the mean scores for the subjects): the highest scores were obtained using natural human speech--9.83 for word repetition and 12.00 on paragraph comprehension; the lowest scores were obtained upon first exposure to the synthetic speech--4.83 for word repetition and 9.50 on paragraph comprehension; however, the scores for final tests using synthesized speech were most encouraging--9.37 for word repetition and 11.17 on paragraph meaning. Given the sample size, there is no statistically significant difference between the human speech scores and the final synthetic speech scores. Later studies will utilize larger and more diverse population samples, as well as more extensive test material, but the results obtained from this preliminary study agree with the experience of nearly everyone who has practiced with the reading machine--it is not difficult to comprehend the synthetic speech after only a few hours of exposure.

AAAS Office of Opportunities in Science

Science, Technology and the Handicapped

Edited by
Martha Ross Redden
Wayne Schwandt

American Association for the Advancement of Science
1776 Massachusetts Avenue, N.W., Washington, D. C. 20036

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SCIENCE, TECHNOLOGY AND THE HANDICAPPED

PROCEEDINGS AND ACTIVITIES
SPONSORED BY
THE PROJECT ON THE HANDICAPPED IN SCIENCE
AAAS ANNUAL MEETING
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PREFACE

The symposium Science, Technology and the Handicapped held at the 1976 AAAS Annual Meeting in Boston explored the technological advances being made for the handicapped, the ways in which architectural, transportation and career barriers are being overcome for the handicapped scientist, and implications for action by professional associations. The symposium drew attention to research data and dramatic technological advances and related these to policy priorities, legal requirements, educational needs and needs for further research and development. Scientists who are themselves disabled participated with design and development engineers and policy and educational specialists. The overall goal of the symposium was to emphasize the need to involve science and technology so that handicapped persons may reach their full potential.

In addition to the symposium, the AAAS Project on the Handicapped in Science arranged other activities at the 1976 Annual Meeting to focus the attention of the science community on the concerns of the handicapped and to make the meeting fully accessible. These activities included: A resource and information center; exhibits at Science International 1976, "Science Education, Research and Technology"; a luncheon concerning perspectives on the education of the handicapped, "A Natural Partnership"; a breakfast, "Rehabilitation Research on Disability: New Horizons"; a news conference, planning meeting and reception. This publication contains the proceedings of the symposium and the speeches presented at the luncheon and breakfast. The report of the planning meeting, a list of the exhibits, and a description of the Project on the Handicapped in Science are appended.

ACKNOWLEDGMENTS

The staff of the AAAS Project on the Handicapped in Science wishes to acknowledge the contributions of other individuals who participated in the Project activities at the AAAS Annual Meeting in Boston, February 18-24, 1976 and those who assisted in the preparation of this manuscript.

We deeply appreciate the assistance of the symposium arrangers and presiders, Richard H. Bolt, John A. Swets, Barry Unger and Edward Keller, Jr. whose assistance in deciding the scope of the symposium and selecting the participants was invaluable. We also wish to thank Richard Goldberg and the Massachusetts Rehabilitation Commission for arranging the breakfast; Edward Keller, Jr. for organizaing and presiding at the planning meeting and Mark N. Ozer for conducting the planning session; Kay Moore for arranging interpretation services at each activity; John Gavin and Roger Revelle for their leadership and opening comments at the luncheon; each person who presented a paper; the persons who arranged for and took part in the exhibits; and Janet Brown whose guidance made the whole Project possible.

We acknowledge the assistance of other staff of the AAAS: William D. Carey, Executive Officer, for his continuous support through all phases of this project; Arthur Herschman, Elizabeth Zeutschel and Jim Mears, of the Meetings Office, for their advice and patient guidance both prior to and during the meeting; Carol Rogers, Public Information Officer, who advised and assisted in publicity for the Project activities; and Hans Nussbaum for his interest and support of the Project and for sharing his talents to add a song to the reception. We would also like to thank especially Gail Green for her work on the final typing of this document.

A special thanks is due also to others who directly or indirectly assisted in the meeting activities: Andrea Schein, coordinator of volunteer services and the many volunteers for their indefatigable assistance; members of the Massachusetts Council of Organizations of the Handicapped who gave generously of their time to advise and help us before and during the meeting; John Driscoll of the Rehabilitation Services Administration, Regional Office, who helped contact persons in Boston knowledgeable about local resources; Joe Fenton, Project Officer of the Rehabilition Services Administration, who gave helpful advice throughout the Project.

Three very special groups of people deserve our heartfelt thanks: The Project on the Handicapped in Science Advisory Group, the AAAS Boston Advisory Committee, and the AAAS Board of Directors. The Project Advisory Group has given unselfishly of their time from the first planning meeting in September 1975 and continuing throughout the meeting in Boston. The Boston Advisory Committee cooperated with the Project staff to facilitate the arrangements for all special meeting activities for the handicapped. The AAAS Board of Directors, especially Margaret Mead, Roger Revelle, and Richard Bolt, who have supported the Project since its beginning.

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The Kurzweil Reading Machine
A Technical Overview

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Cambridge, Massachusetts

This paper discusses the Kurzweil Reading Machine from two perspectives: first, why we selected the approaches that we did; and second, how the machine works--a description of the sequence of processing steps that cause information to be converted from text images to speech sounds.

The reading machine converts ordinary printed material, such as typed letters, books, and memoranda in a wide variety of type styles, to comprehensible, full-words, synthetic English speech. It is intended as a reading prosthetic aid to enable blind persons to read, at rapid rates, the diversity of material available in inkprint without significant strain or extensive training.

Physically, the device consists of three, reasonably compact units. The Reading Unit, upon which the printed material is placed, is about the size of a selectric typewriter--two feet by two feet by eighteen inches high. The Electronic Control Unit, which contains a minicomputer and other special-purpose electronics, is about a two foot cube. The Control Box is about the size of a desktop calculator--six inches by six inches by three inches.

The user places printed material face down on the glass plate which forms the top surface of the Reading Unit. The user then instructs the machine to begin reading the page by pressing the "PAGE" button on the Control Box. The printed material is automatically scanned by a small, electronic camera moving on an X-Y mover beneath the glass plate. The camera converts the printed image into an electronic image which is preprocessed by special-purpose electronics and then transmitted to the minicomputer in the Electronic Control Unit. The computer analyzes the electronic image to locate the letters, to recognize them, to compute the sequence of speech sounds, and finally to generate control signals for a set of special synthesizer circuits to produce the artificial speech. The computer also controls the movement of the camera on the X-Y mover.

Through the use of the control buttons, the user can control the sequence of reading. For example, to halt the machine and direct it to repeat a line or section of text and to skip rapidly forward to skim text. The machine can be directed to go slowly--one word at a time, to locate a particular word that was unclear, and to spell out that word. With these and other controls, the user is able to take an active rather than passive role in reading. In addition to absorbing the content of the reading material, the user is making decisions-- to examine a word more closely, to repeat a line, to skip a section, to skim.

In order to facilitate the discussion of the techniques utilized in the reading machine, it would be useful to separate the Print-to-Speech problem into two component problems: print-to-grapheme string and grapheme string-to-speech, each of these component problems representing a rather different technology. Print-to-grapheme string conversion, which we also can call Optical Character Recognition, requires: (1) scanning the printed material to convert the print image into an electronic image; (2) analysis of the electronic image to locate and separate out contiguous subimages suspected of being characters; and (3) identification of the character forms based on shape, position, and context.

Before discussing this process in more detail, I would like to examine several questions of approach. The most basic is, "Why is Optical Character Recognition required in the first place?" Briefly, there is an alternative to Character Recognition, that of transmitting the unprocessed visual signal to another sensory channel. For the tactile sense, such a device would provide a stimulus or impulse picture of each letter as it appeared on the page for the user to touch and recognize. For the auditory sense, each printed letter would be converted to sound with the vertical and horizontal dimensions of each letter converted to pitch and time, respectively. Such devices, called Direct Translation Devices, exist. The problem with the Direct Translation concept is the basic incompatibility of the different human sensory channels. Computer input channels do not have this problem. Different computer input channels use basically the same codes, and information can readily be converted from one media to another without necessitating a complex conversion. Human sensory channels, on the other hand, process sophisticated patterns of information, and the types of patterns that provide optimal communication for one sense are not cognized easily or rapidly by another. A dramatic example of the basic incompatibility of the perceptual domains of different human senses is human speech. Speech is readily perceived by the auditory sense, yet when pictorial representations of speech, through Spectograms or other methods, is presented to the visual sense, even with extensive practice, identification of words spoken by different speakers is virtually impossible. The practical experience with Direct Translation reading aids, from tests of both the Optacon, a tactile Direct Translation device, and the Stereotoner, an auditory Direct Translation device, is that users can learn to recognize letters, but the process is difficult and reading rates attainable are very slow. Theoretical considerations as well as the experimental evidence yield the conclusion that, to attain rapid reading rates comparable to sighted readers, the information must be presented using patterns optimal for either the tactile or auditory sense. This requires the reading device itself to recognize the letter sequence rather than leaving this task of recognition to the user.

A second issue concerns the handling of multiple type styles. There are four ways this problem might be approached: (1) restricting the input to a single style of type; (2) restricting the input to a limited number of type styles, (3) reprogramming the device for each different type style (each time the user changed the type style); and (4) providing a system that handles different styles of type without reprogramming. The first two approaches severely limit the range of reading material that the device would make available. This is especially true since so-called "cold" typesetting techniques recently have resulted in a proliferation of new type styles. The third approach requires the user to identify the type style being read, to know when the type style is changing, and to what style. This would be difficult for a sighted reader. For a blind reader, it would require the regular intervention of a sighted assistant who could make these identifications. To maximize both the independence of the blind reader, as well as the diversity of inkprint material that could be read, the fourth approach, known as multifont character recognition, is necessary.

Having established the basic requirements for the "Print" half of a reading machine, we come back to the three functional steps of print-to-grapheme string conversion: scanning, character separation, and identification. Scanning is perhaps the simplest step conceptually, but not one to be overlooked easily in reading-machine design. The problem is basically mechanical, moving the camera horizontally and vertically using a system that is both reliable and inexpensive. Recognizing that electromechanical projects often fail in the mechanical department, we invested considerable resources in developing a reliable design. Our experience thus far with the X-Y mover that we developed indicates that we have achieved the goals of economy and reliability. A key design parameter in developing an inexpensive yet reliable X-Y mover was to sacrifice high degrees of positional accuracy which the software, being reasonably flexible, does not require.

The camera itself contains a Charge-Coupled-Device scanning array, with 500 light-sensitive elements arranged in a straight line. For each sampling period of two milliseconds, the scanning array transmits a thin, vertical slice of the image to the preprocessing electronics. The camera moves in a horizontal direction (both left-to-right and right-to-left), so that multiple samples allow the computer to build a two-dimensional image in its memory. Every second, 500 samples of 500 points, or a quarter million points in all, are transmitted by the scanning array. These quarter million points are preprocessed by special purpose electronics to enhance contrast and to reduce storage requirements before being transmitted via a Direct-Memory-Access channel to the computer.

Once the image is transmitted, the computer discards "noisy" images suspected of being pictures and other nontextual material. Images that have basic horizontal-vertical ratios and positional relationships associated with text are then separated into discrete characters. The basic algorithm for character separation is the contiguity rule, based on the observation that printed characters generally do not touch one another. There are exceptions to this rule, however, especially in poorly printed material. A module called "Split Analysis" is responsible for analyzing contiguous images where the vertical-horizontal ratio exceeds that for normal characters. The Split Analysis module identifies likely "split" points for touching characters, and then separates merged letters into discrete images. The Disambiguator module, which I will discuss later is responsible for the reverse process of reconnecting examples of broken letters.

Once the image has been separated into individual character forms, the computer identifies the letter and replaces the real-time image of the character with its identification. It is important that this be done rapidly to free the extensive amount of memory required for each character image. There are, in fact, never more than two or three character images in memory at one time.

There are two ways in which this identification problem can be approached. The first involves storing a digitized picture of every character in the identification set in memory, comparing a scanned image to each stored picture, and selecting the stored image that correlates most closely. This is known as Template Matching and is a successful technique, provided that the size of the identification set is restricted. It works well for a single type style or a severely restricted set of type styles, but deteriorates rapidly when the identification set is expanded to include a large number of type styles. Template Matching does not, therefore, achieve the goal of automatic recognition of the wide variety of fonts in use today. There exist variations of Template Matching, called Minimal Property Extraction, which involve storing linear or simple functions of images rather than entire digitized images. Minimal Property Extraction has some advantages over Template Matching in terms of storage requirements, but has the same font limitation.

The technique we employed to recognize letters in a wide variety of type styles without excessive storage requirements was to define letters in terms of properties that are relatively invariant across the types of changes that occur between type styles. Through extensive experimentation, we have found that the type of properties that provide the greatest invariance are geometric properties--lines, vertices, loops, concavities, and their relationships. In this type of classification, an upper-case "A" without serifs would be defined to have: (1) a loop; (2) a loop extension starting on the west side of the loop headed south (a west-south loop extension); (3) an east-south loop extension; (4) a north-central to south-west line segment; (5) a north-central to south-east line segment; and (6) one south concavity. If the line segments in the upper-case A were thicker or thinner, or if the angle at the north-central vertex were larger or smaller, the same set of topological properties would be extracted. Most of the changes across type styles involve vertex angle sizes and line thickness, and the "high-level" properties we have implemented provide the necessary invariance across these types of changes.

One type of change between type styles does not provide invariant results for these properties--the arrangement of serifs. Serifs add additional line segments, vertices, and sometimes even additional concavities. This is handled by defining the serif and sans-serif form of each character separately. Sometimes, several serif form definitions are required due to different possible arrangements of the serifs for a particular character. Substantially different character forms are handled the same way. There are, in fact, in our character definition table, an average of five different property sets for each character in the identification set. Since the properties are binary and require very little storage for each property set, the entire character definition table, with approximately five property sets for each character, requires less memory than a single set of templates defining a single type style.

The topological analysis described above analyzes only the shape of each character. Shape alone is not always sufficient for a final identification, and the output of this "Shape Recognizer" is frequently an "Ambiguity Code" indicating one of several possible final identifications. For example, a vertical bar could be a lower-case "l" [el], an upper-case "I" [eye], or the number "1" [one]. Similarly, the shape associated with a serifed lower-case "l" could be a lower-case "[el]", a lower-case "[eye]" (if there is a dot above it), or the number "[one]". The final identification for such ambiguity codes is made by the "Disambiguator" module, which takes into account positional factors such as north and south boundaries in relation to nearby characters, letter size, the presence of dots above or below the character, as well as contextual cues. As an example of a contextual cue, a vertical bar with a space to the left and a consonant to the right is probably a capital "[eye]" rather than a small "[el]" because words starting with "[el]" do not have second-letter consonants.

Occasionally, one of the possible final identifications for a particular Ambiguity Code is a letter fragment. If a possible letter fragment is next to an ambiguity code with a possible matching fragment, the disambiguator will merge the two fragments into a single, final identification. In this way, at least some broken letters are identified as single characters.

The output of the Disambiguator is a set of final character identifications, in Ascii code, and that completes the print-to-grapheme string conversion process.

We now come to the "Output" process--or grapheme string-to-speech conversion. Again, we should consider several questions of approach.

First, why speech? For the auditory sense, other options would be Morse code, spelled letters, and so-called "phonetic" speech consisting of concatenated letter sounds. Morse code and spelled letters require extensive training and result in relatively slow reading speeds. Phonetic speech is also difficult to comprehend, requires extensive training, and results in slow reading rates for most users. In a conference report in 1971, Franklin S. Cooper and Patrick W. Nye of Haskins Laboratories reported:

> Initial studies compared the readability of several non-speech codes with natural speech sounds. The results of this research indicated, on empirical grounds, that only a device

> which could produce spoken English would provide high reading rates and easy comprehension. Moreover, because speech output requires no training and a far smaller investment of interpretive effort than any other form of acoustic or tactile display, spoken material has a substantially greater chance of being successfully used by a commanding segment of the blind community.[1]

There has been a number of other studies comparing different auditory outputs, but there is little point in belaboring the issue--it has been clear for several years that full-word speech is necessary to achieve rapid reading rates, as well as minimal training requirements.

A braille output would be optimal for the tactile sense. We did not select a braille output because (1) only a relatively small percentage of blind persons use braille extensively or at all; (2) many blind persons do not have the tactile sensitivity to use braille; and (3) while some persons can read braille at speech rates (and even higher rates), the average braille reading speed is less than one-half of speech rates. It was clear to us that a full-word speech output would provide rapid reading rates to the widest possible segment of the blind population. A braille output is, however, a feasible attachment to the Kurzweil Reading Machine, all that is required is a braille printer.

Having decided on a full-word speech output, there is still one question of approach. The principal technical problem associated with full-word speech is determining how words are pronounced from the way they are spelled, which we will call grapheme-to-phoneme conversion. One approach is to store a pronunciation dictionary in the computer's memory, storing the phoneme string for each word in the main corpus of 100,000 English words. Another approach is to store only roots of words, stripping off prefixes and suffixes, and splitting apart multiroot words. This type of morphological stripping of words prior to their entry is a dictionary cuts down the number of entries required to some extent. Both of these approaches, however, require a substantial amount of computer memory to hold the dictionary and are not practical approaches for a compact and affordable device using available memory technologies.

The approach we have taken is to implement a set of phonetic rules which define the relationship between spelling and pronunciation in the English language. A set of approximately 1000 rules accurately defines this relationship for most words. We have found it necessary to include a dictionary of exceptions to the rules, but since the dictionary requires no more than about 2000 entries, and since the rules themselves are quite compact (only about 4000, 16-bit words of storage), the entire system including the exceptions is practical for a small minicomputer-based system.

The rules define the sequence of phonemes associated with different sequences of graphemes and their interactions. As an example, if "sch" is followed by a consonant, the "sch" is generally soft, as in the name "Schneider" or the word "schnapps." If followed by a vowel, the "sch" is generally hard, as in "school," "scheme," or "schizophrenia." In addition to the rules and the exception dictionary, the speech system includes a morphological analysis to strip off prefixes and suffixes to increase the applicability of the rules and dictionary.

The speech system also includes a simple syntax analysis to provide a stress contour across each sentence. The speech is not, therefore, a monotone. These prosodic features or variations in stress level are intended to reduce listener fatigue by making the speech more pleasant to listen to.

One type of processing not attempted by the machine is the resolving of so-called "ambiguous" words--for example "read" as in "can you read" and "have you read," or "lives" as in "one hundred lives were lost" and "he lives down the block." This type of disambiguation is quite feasible but would add significant cost and complexity to the device. There are surprisingly few ambiguous words--less than twenty--and the disambiguation can be achieved by the user from context quite easily, once the user is made aware of the necessity to do so. This was one area, therefore, that we felt a wise compromise dictated leaving the problem unsolved.

Once the grapheme string has been converted to a list of phonemes with associated stress levels by the morphological analysis, phonetic rules, exception dictionary and snytactical stress analysis, control signals are generated to direct a set of electroric synthesizer circuits to produce the speech sounds associated with each phoneme.

Part of the speech system is a 300-character circular grapheme buffer, which stores the last 300 recognized characters. With the buffer and the set of user controls, the user is able to repeat sections of text, locate particular words and have them spelled, simulate skimming functions, and so on. The rate of speech as well as the pitch and volume are also controlled by the user.

I would like to play for you a recording made several days ago of the machine. The tape is a recording of the machine reading the text of the Gettysburg Address. The sheet it was reading contained eight different type fonts, and I have copies of it for those who are interested. While this was recorded, the machine was directed to read the first three lines twice, then to repeat it a third time at a faster rate, and finally a fourth time going slowly word by word, occasionally spelling out a word.

Before I play the tape, I would like to point out, that the speech output requires a little getting used to. Our experience thus far indicates strongly that virtually everyone attains a high degree of comprehension after several hours of exposure. Extensive training is not, therefore, required to comprehend the speech at rapid rates. Without any exposure, listeners vary in their ability to comprehend, although some people can understand it with little or no experience.

After about five years of preliminary investigation--feasibility studies, analysis of different algorithms, component reviews, literature searches, etc., Kurzweil Computer Products was formed about two and a half years ago to develop and perfect a working machine. Over a year ago, the first working model was completed that could convert printed text to full-word speech. We have been perfecting and improving the device since that time, and now have the fifth system or version of the reading machine completed.

The emphasis now is to test thoroughly the machine in the field in a wide variety of user situations and improve the device based on the feedback we expect to receive. There currently are two field-test programs--one funded by DHEW's Bureau of Education for the Handicapped will place units of the reading machine at the Perkins School for the Blind and the Boston School System; and the second, a human engineering study of the reading machine to be conducted by the National Federation of the Blind will place reading machines in a variety of user situations. It is our hope that at the conclusion of these field tests the machine will meet as closely as possible the reading needs of blind people and rapidly can be made available to the broadest possible segment of the blind population.

NOTE

[1] Franklin S. Cooper and Patrick W. Nye, "Plans for the Evaluation of a High-Performance Reading Machine for the Blind" in *Evaluation of Sensory Aids for the Visually Handicapped*, a report on a conference sponsored by the Subcommittee on Sensory Aids, Committee on Prosthetics Research and Development, National Academy of Sciences, 11-12 November 1971.

Bringing the Disabled User Into the Design Process: Improving New Technology for the Disabled

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It is commonplace to suggest that potential consumers of new programs or products ought to be able to influence their development and design. Indeed, in an age when social scientists dwell on how cultural biases and lack of understanding of the perspectives of others inhibit our efforts to solve social problems, few scientists would question the concept of getting input from those who will be serviced by their research. This would seem especially true in the design of technology for the physically disabled. Such technology is generally intended to facilitate personal and individual activities such as mobility and reading which require significant man-machine interaction. Its design therefore should require considerable input on user preferences and needs.

Unfortunately, attempts at involving users--disabled or not--have not fared well in practice. In many cases, efforts at user involvement have only resulted in misunderstandings and little apparent contribution to product excellence.

This paper will discuss the problems associated with involving the user, particularly the physically disabled user, in the process of technological innovation and will present a strategy for facilitating productive user-designer interaction. The prescriptions contained in this strategy will be illustrated with examples from the development and dissemination of the Kurzweil Reading Machine for the blind.

I believe that the failure of efforts at user involvement may be due more to the ways the concept has been applied than to any fault in the concept.

Operational questions that face the designer or government policy-maker attempting to facilitate user involvement include the following:

1. To what degree should potential users be involved? What influence over what decisions should the user be given?

2. At what stages in the research and development process should the user's input be sought? In what specific content areas should this input be solicited?

3. Finally, how should such relationships between designers and users be created and structured? What informal contract should the scientist and user have with each other regarding their respective roles? On a day-to-day level, what kinds of involvement activities are appropriate?

To answer adequately these operational questions and thus attempt to maximize the potential of the user-involvement concept, we need to understand this concept in the context of broader views of the innovation process and to analyze the specific problems encountered in attempts to apply it.

CONCEPTUAL APPROACHES TO INNOVATION

By studying the general literature on innovation, we may be able to combine the user-involvement concept and other approaches in a way that maximizes the likelihood of good innovation.

One view of invention and innovation--one particularly advanced by Dr. Jacob Rabinow, Chief of the Office of Invention and Innovation of the National Bureau of Standards--is that a nation's reward structure, set through conscious government policy, is a key factor in determining the type and amount of innovations that occur.[1] For example, Dr. Rabinow believes that changes in patent law and changes in government policy that would make it easier for high technology enterprises to get loans together would increase technological innovation. In a more direct way, the government can also put research funds into areas of new technology it wants to encourage. For example, in the case of the Kurzweil Reading Machine for the blind, the interest of the Bureau of Education for the Handicapped in seeing early models built and tested has been very important in getting this technological innovation off the ground.

To go a step further concerning the role of the government, through such tools as its guidelines for contractors, the government can, if it wishes, influence the way research is carried out. For example, although I do not necessarily recommend this, the government could create legal requirements for user involvement in technology projects that it funds.

A second and more systems-oriented view, which we can call the rationalist approach, sees invention and the innovation that builds upon it as a process which can be managed, analyzed into its component parts, and made subject to rational controls. In its purest state, without qualifying attitudes, the rational view emphasizes a process which is goal-oriented, orderly, and a process in which it is clear ahead of time in which discipline or technology the answer falls. Innovation is seen as basically a cut and dried matter, a follow-up on an initial good statement of research goals.

In analyzing the failure of innovative attempts, members of the rationalist school thus are likely to criticize the lack of clarity of innovative goals, the lack of specification of steps in the development and implementation process, and the absence of solid evaluation and monitoring along the way. Certainly there is much truth in this criticism. We have all experienced poorly directed projects and/or projects with poorly stated goals.

The remedy, according to the rationalists, is for the innovator to choose a clear goal (perhaps through marketing analysis, perhaps through the personal perceptions of an inventor) to identify the appropriate technology beforehand, and then to plan and schedule an orderly process for the application of this identified body of knowledge. An application of this approach has been the space programs of the U.S. government, where planners painstakingly figure out, before any major project begins, the performance characteristics of each component and the technical innovations to be implemented, and then produce a stage-by-stage development program.

There are limitations, however, to unbridled application of the rationalist approach. Problems as well as opportunities that arise in the process of invention cannot be predicted or planned in advance. Furthermore, needs and goals, on the one hand, and new technology, on the other, often determine one another in the course of development. Neither can be fully detrmined at the outset. Often, a new technology is so radical or unexpected, or provides previously unimagined capabilities, that uses for it can be proposed only after the technology is at least partially developed. When this is the case, it is unlikely that a priori marketing analysis or a survey of needs would have indicated a need for it. For example, it is unlikely that a market analysis in the days of the horse and buggy would have indicated the need for an automobile because the idea of the horseless carriage was not a matter of fact but rather a radical idea outside the experience of most people of that time.[2] We realize, in fact, that invention and innovation involve highly creative processes including intuition, emotion, and analogous application of developments in parallel fields, and often work backward from and exploit intriguing phenomena that have been discovered as a part of basic research following other goals. Clearly, a rationalist ordered approach, although helpful in planning details of the innovative process, is not enough by itself. This limitation is important in determining the optimal points in the research and development process at which to facilitate user involvement.

PROBLEMS WITH USER INVOLVEMENT

With the above discussion in mind, we can now examine the specific problems connected with user involvement as an approach to improving technological innovation.

A first problem is that the concept of user involvement is very broad and may be endorsed by people for reasons other than its direct value in improving the quality and the relevance of a product. Thus some people see user involvement as a moral imperative in itself that people should have a voice in decisions which affect their lives. Others emphasize that the appearance of participation in decisions buys the internal commitment of potential customers and these advocates of user involvement therefore tend to emphasize appearance over reality. Either of these approaches can generate ambivalence or cynicism about the effectiveness of user involvement and a lack of clarity about what it should constitute.

Even where both designers and users appear to have a genuine commitment to users actually influencing the design process, problems still occur.

If one party feels relatively unable to influence the other party, this feeling can inhibit dialogue and decrease the likelihood of a constructive outcome. If the user perceives himself as less influential (something often although not always related to perceptions of inferior status or economic means), there is frequently an expectation that the designer will ignore the user's recommendations. Social psychology laboratory studies[3] in fact confirm that the greater the perceived influence differential in a situation, the more negative will be attitudes of the perceived less-influential party toward the more influential.

Thus disabled users who may perceive themselves at a disadvantage to a designer--typically a government agency or manufacturing corporation--are likely to be distrustful of its offers of cooperation, or to be too intimidated to make constructive criticisms.

From the viewpoint of the designer organization that considers itself relatively more powerful than its user counterparts, there is a tendency to see the user as not wanting to voluntarily cooperate or to accept intelligent compromise. Again, studies in the social psychology of attribution indirectly confirm this explanation.

Obviously, the two attitudes can reinforce each other. When such feelings exist, both designers and users are less likely to believe in and spend the energy in confronting--i.e., clarifying and exploring--and resolving the differences between them. If users feel that there is no point in stating their opinions and if designers feel that users do not want to be reasonable, then issues will either not be confronted in a helpful way or will be avoided entirely, and the quality of a program or product will suffer.

Another reason for ineffective interaction is that effective problem-solving requires considerable interpersonal skills in the giving and receiving of feedback. Designers often become defensive and unable to listen to constructive criticism by users. Although this defensiveness is readily understandable in terms of the real psychological commitment designers have put into their efforts, such defensiveness can prevent designers from hearing valid suggestions and can reinforce users' stereotypes of them as unresponsive. Users, for their part, often tend to aggravate the situation by making their suggestions, in nonconstructive ways that imply a judgment of the designer's intelligence or intent.

These tendencies toward ineffective behavior may be reinforced on the designer side by corporate organizational norms of avoiding the open airing of disagreement and on the user side by norms (possibly borne out of the internal politics of consumer organizations) that encourage unproductive, deliberately critical attitudes toward corporate and government designers, or what is sometimes claimed to be "grandstanding."

Small wonder, then, looking at such interpersonal and organizational barriers, that there is often lack of trust and rigidness on both parts, and ineffective contributions to development. Social scientists such as Argyris and Schön and Bolman have demonstrated that these relationship qualities appear to be true across a wide variety of professional-client relationships such as those between school administrators and parents, and between city planners and community groups.

Beyond the interpersonal issues, however, another difficulty is that users often do not have enough information or expert knowledge to effectively criticize designs and to contribute suggestions or the money to purchase such expertise. For example, one of the reasons community groups have had difficulty in influencing city and highway planning officials is that the community groups usually have not had the expertise nor been provided funds to hire staffs with the technical expertise to intelligently collaborate with and/or confront the official experts.

A final problem with user involvement is that it is usually not coordinated with the timing of the innovation process as described above, a process with unpredictable as well as orderly aspects. On one hand, user involvement is frequently seen only in terms of using market analyses to generate ideas for new products. Because of the unplanned nature of major advances, this approach used alone may in some cases actually construct creativity. On the other hand, other designers limit user influence to a yes or no vote by viewing involvement primarily in terms of final consumer approval tests at the tail end of the development process. In constrast to both these views, we can see that between the beginning of a project and its dissemination, there is specific research and development that is susceptible to rational, ordered planning and a clear statement of goals. Here, the minigoals represented by user needs and preferences would be helpful input, but, alas, user involvement is rarely structured into this "nuts and bolts" stage of the design process.

To summarize, ineffective user involvement can be caused by such factors as organizational politics and poor relationships, lack of information and technical expertise by users, and the lack of a clear purpose and sensible structure for fitting the involvement of potential users into the ongoing processes of innovation.

PRESCRIPTIONS FOR PRODUCTIVE USER INVOLVEMENT

I come, however, not to bury the concept of user involvement but to specify and to improve it. On the basis of the preceding discussion, we can specify a normative strategy for user involvement in the design process and then look at examples of its application.

1. The first element of such a strategy is that a designer should not solicit user involvement unless there is a genuine commitment to users actually influencing the design in the belief that this will increase product quality or relevance. To do otherwise is to invite cynicism, even if the designer has "honorable" intentions.

2. Second, the best points for users to participate in the design process are those at which users can provide design objectives--e.g., the provision of controls on the Kurzweil Reading Machine to allow the blind user to repeat and spell out words when desired--for the orderly programmable parts of the design process; or where users can evaluate proposed alternative designs for meeting their needs, or where users can help in modifying the device to improve its usability.

3. Subject matter and the plan of activities for user involvement should be agreed upon in advance by both parties. User input should emphasize what needs to be done more than how to do it. For example, a designer would not expect users, disabled or otherwise, to improve electronic circuits or write new computer programs, but would desire input from disabled users on the relative priorities they would assign to certain features of a product and the usage needs they would anticipate, such as the kinds of page formats they want a reading machine to handle.

   Activity specifications might include frequency of meetings, what kinds of reports if any, length of relationship (indefinite or short-term), and so on. These understandings are not ironclad commitments naturally and are subject to later modification, but nonetheless can form the basis for each part's expectations of the relationship.

4. A necessary but not obvious matter in structuring user involvement is defining first whom we mean by "potential users." Rather than the word "user," which has narrow connotations of only those who will physically operate a device, it is better to use the broader concept of "clients." I define clients as "those who will be affected by the innovation, directly or indirectly." Thus, for example, clients of technology for the physically disabled typically will include disabled adults, the rehabilitation specialists who work with them, disabled children, their parents, and their teachers. Each of these groups will have its special perspective, self-interest, and need, and thus each can provide useful input into the design process.

   Of course, user involvement will be less formal in its beginnings; here, general purposes for a project or program are just being developed and it is often unclear which groups will be served or affected by it.

   However, when projects require less radically new technology, and when an intended user population can be identified from the start, it may be both meaningful and feasible to involve users earlier and more formally in the specification of design objectives.

5. Mechanisms should be built into the program which will provide for or allow the user to have enough information and expert knowledge to discuss intelligently alternate designs and their cost benefit trade-offs and implications for the user.

6. In light of the considerable potential for organizational and interpersonal difficulties, designers and users should work toward creating an interpersonal climate where differences can be surfaced, confronted, and responsibly resolved--with plenty of give and take by both parties. Specific steps in this direction can include informal advance planning of the relationship, the appointing of specific representatives from both parties to monitor the user-involvement program, the engagement of neutral third-party consultants, and the provision of structures as detailed below to increase the influence of users in the relationship.

Each of these suggestions, incidentally, has analogues in the emerging research and prescriptions for cooperation in such diverse areas as police-community and university-public school relationships.

EXAMPLES FROM THE KURZWEIL READING MACHINE

We can now discuss these ideas in terms of the development of the Kurzweil Reading Machine and the two testing programs Kurzweil Computer Products ("the company") is engaged in.

First, we can look at the timing of user involvement over the history of the machine.

In the late 1960s Raymond Kurzweil, then an undergraduate at MIT, without the constraint of a specific planned application and as a part of a basic interest in pattern recognition, studied the problems of character recognition. Over time, specific and unique approaches to property extraction were conceived, and a plan for implementing them partially worked out.

After several years of theoretical work, efforts were made to look at how the technology that had emerged--low-cost, high-level property extraction of multifont characters--might be applied. The new technology seemed appropriate to the needs of blind people to read efficiently the great variety of type styles seen in ordinary ink-printed books, typewritten letters, and other printed communications. At this time, around 1973, the reading needs of the blind were examined both in terms of the approaches already in use and from the viewpoint of potential users. This was accomplished through reading papers by and discussions with rehabilitation professionals and blind persons. This rather informal stage of user involvement, both indirect and direct, influenced the general strategy for the configuration of a device using the new technology as well as the specific development objectives for the next three years.

Now, three years and a major stage later, the company has a reliable working prototype and users are again involved--this time more formally and specifically with regard to maximizing the usefulness of the device. The reading machine must be able to interact with users and respond flexibly to their needs. To achieve this, the design process requires information on the needs and preferences of those who will use the equipment--input on the nature, design, and arrangement of user controls; the physical configuration of the machine, text material specifications, and other factors. Most of these questions cannot be answered in advance but must be answered through a testing and modification program in conjunction with potential users of the device. The company is therefore implementing two programs of client input.

The first program, a contract with the Bureau of Education for the Handicapped, which is part of the U.S. Department of Health, Education, and Welfare, demonstrates the wide definition of "client" as those who will be affected by an innovation, directly or indirectly. Under this program, test units of the reading machine, which are currently being constructed, will be placed at the Perkins School for the Blind and in the Visually Handicapped Program of the Boston School System. Extensive tests will be conducted aimed at improving the reading machine on the basis of the observations and experience of blind school children, their teachers, and their parents. Data will be collected on reading comprehension levels achieved on different reading materials and on factors that affect this level, with a view toward maximizing both overall comprehension and the diversity of materials that can be read.

The second program is a human engineering study to be conducted by the National Federation of the Blind ("NFB") in collaboration with the company. Under this program, the NFB will place six models of the reading machine in a variety of user situations--in the office of a blind executive, lawyer, engineer, or scientist, in a rehabilitation center and so on--evaluate and determine how to improve the device.

Although both programs are important to further development of the Kurzweil Reading Machine, I will emphasize examples from the NFB program because it concerns adult blind users, and therefore is more elaborately structured for user involvement.

This program demonstrates many of the above ideas about the dynamics of collaboration with users. The NFB, with more than 50,000 members, is the largest organization of blind people, and explicitly describes itself as a consumer organization. Each party in the relationship can realize gains from it: from the company's viewpoint a better, more marketable product; from the NFB's viewpoint the opportunity to influence and improve something that will have a significant impact on the lives of blind people. This increases the likelihood that each party is listening and responsible.

The subject matter of the interaction and plan of activities has been spelled out in a twenty-four page memorandum of intent. I will summarize the activities as follows: after users have begun their exposure to the machine, questionnaires on user experience will feed into periodic status reports. These are to be used as advance inputs to informal technical meetings between the program staff and the company's designers. These meetings will seek to integrate the ongoing data with the design of improvements to the machine in such areas as performance and control configuration. The agenda for these meetings will include discussion of the research results gained from users, categorization of the problems that are thus identified, the development of possible options for their remediation, the setting of priorities for such options with regard to both cost considerations and the needs and preferences of blind users, and, finally, recommending solutions. Additionally, between technical meetings NFB's technical staff and the Kurzweil staff will monitor the changes that have been introduced.

There are significant advantages for a designer to work with an organization such as the NFB rather than with unaffiliated, individual users. Users belonging to a recognized organization are more likely to have confidence in the ability of their organization to influence the design and therefore are more likely to express their opinions and confront differences. The same benefit of working with organized users is seen in the Bureau of Education for the Handicapped program where clients will interact with the company as part of the Boston School System and the Perkins School for the Blind.

A large user organization, incidentally, is likely to represent a spectrum of needs, preferences, and user characteristics. Strong support of the project by the organization's leadership, as is the case with the client organizations the company is working with, also increases the likelihood that individual members will be seriously committed to the project.

The funding structure for the NFB-company program also facilitates the autonomy of the user group in the relationship. The NFB supports its role from funds directly contributed to it for this purpose by private foundations. From this budget, the NFB is purchasing the six machines and hiring the specialists to manage the testing and the NFB's input into the modification process.

This budgetary arrangement is interesting in light of recent research findings by Derr and Demb.[5] They studied several federally funded projects aimed at developing collaboration between prominent university graduate-education departments and nearby big-city public school systems. The more productive relationships--measured in increased perceived relevance of university courses and amount of consultation rendered to the urban school system--resulted when the urban school systems were given management control of the budget by the government, and thus had more perceived autonomy.

Because of the importance of users either having or being supplied with expert knowledge, the NFB's budget for the project allows it to employ individuals from within as well as from outside its membership, people with skills in such areas as engineering design, computer science, human-factors psychology, and the analysis of cost: benefit trade-offs. Two prominent experts with expertise in the engineering, configuration, implementation, and evaluation of equipment and devices for the disabled have been engaged as program director and program associate. Both men also happen to be blind and have been in the forefront of those advocating a greater role for the blind consumer of new technology. Other assistants and technical consultants--both blind and sighted--also will be hired.

Finally, we can look at how the formal relationships between Kurzweil and its clients have developed and are being facilitated. The company has had discussions over the last two years with the NFB, the Visually Handicapped Program of the Boston School System, and the Perkins School for the Blind, and these discussions have led to the present programs. In the company and in these organizations, specific individuals have taken responsibility for developing and continuing to monitor these relationships. In addition, because the NFB and the company both feel that the quality of the relationship is important to its effectiveness, together they have agreed to have their work facilitated by an independent social scientist. Through private interviews and direct observation of the technical meetings, this consultant will gather data on how the relationship is working out. The data will be compared and interpreted by him and used to facilitate the development of changes where relevant.

In conclusion, the purpose of these examples has been to provide some indication of how the user-involvement concept can be made operational. It is my hope that by finding and following the conditions that most favor productive user involvement, we may be able to learn more about its true potential for increasing the relevance and quality of innovation--especially new technology for the disabled.

NOTES

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[4] J. W. Thibaut and H. W. Riecken, "Authoritarianism, Status and the Communication of Aggression," *Human Relations*, 8(1955):95-120.

[5] C. Brooklyn Derr and Ada Demb, "Building Collaborative Relationships, A Study of University-Urban School System Interactions," June 1973. (Mimeographed.)

VITA

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Education:

Presently	Doctoral candidate in Administration and Organizational Behavior, Center for the Study of Organizations and Intervention, Harvard University. Course work and qualifying paper completed "With Distinction", presently working on thesis. Recipient of H.E.W. National Fellowship (E.P.D.A.) and elected to Phi Delta Kappa National Honorary.
1975-July	Graduate Professional Development Program, National Training Laboratories Institute for Applied Behavioral Science, (Bethel, Maine)
1973	Certificate of Advanced Study (Administration and Organizational Behavior), Harvard University.
1970	S.M. Alfred P. Sloan School of Management, Massachusetts Institute of Technology.
1969	S.B. in Engineering and Humanities (computer science), Massachusetts Institute of Technology. (National Merit, M.I.T., National Honor Society, and Bodman Foundation Scholar).

Major Professional Activity: (besides Kurzweil Computer Products)

1974-1977	Part-time Lecturer in Management at Boston University. Design and teaching of graduate and undergraduate courses in organizational psychology, management theory, small group and interpersonal relations. Courses have consistently received high ratings.
1973-1974	Lecturer in Business Administration at Northeastern University.
1973-1976	Chairperson, Evaluation Task Force, University Council for Educational Administration "National Level Leadership Program" (funded by Bureau of Education for the Handicapped Dept. of H.E.W.). Development and execution of "intervention-evalution" system of consultation, evaluation, and training.
1970-1972	Full-time, Assistant Personnel Manager, Hoboken, New Jersey plant of Maxwell House Division of General Foods. Generalist responsibilities in employment, labor relations, counseling, training and organizational development.

Consultation and Training Clients: (social psychology and management).

1972-1976	Boston School System; Canadian Mortgage and Housing Corporation, a Crown corporation; Columbia University Program in Educational Policy, Planning and Management; Digital Equipment Corporation; National Association of State Directors of Special Education; New York M.I.T. Alumni Center; Project ACT (Adult Competency Training), an H.E.W. project at Colorado State University; Science Research Associates; United States Civil Service Commission Middle Management Training Institute.

Other Activity:

Spring 1973	Teaching Fellow for "Managing Organizational Conflict," Administration 214b, a graduate course at Harvard University.
1972-1973	Teaching Fellow at Boston University College of Business Administration. Responsible for instruction and grading of eighty students per term. Taught Be301 (Organizational Psychology) and Be302 (Organizational Sociology).
Summer 1972	Research Assistant, Harvard University, Department of City Planning. Through interviews and questionnaires compared functions of Boston's "Little City Hall" program and Boston-based state representatives.
1970-1971	Planning Committee, Hoboken Outreach drug program (Volunteer).
	Vocational Employment Counselor, Hudson County Urban League Job Skills Center (Volunteer).
1969-1970	Development Research Associates, Cambridge. Management and human relations training for nursing home administrators. Also did research on federal "New Careers"program.
	Instructor, M.I.T. Educational Studies Program. Taught social psychology and led groups for high school students on Saturdays.
	Research Assistant, Management of University Education research project at M.I.T.
1968-1969	Computerized cost benefit analysis of various national reactor programs (under grant from Resources for Future, Inc.). Analysis suggested switch in national development priorities from liquid metal fast breeder reactors to gas cooled fast breeder reactors. Results published in MacAvoy, Economic Strategy for Developing Nuclear Breeder Reactors.

M.I.T. Industrial Psychology practicum study of attitude changes induced by a management training program at Digital Equipment Corporation.

1967 and earlier	Various summer jobs as computer programmer, crystal physics research assistant, and evening news editor and staff writer for Long Branch Daily Record (small local newspaper).

Academic Interests:

Social psychology and administration (especially planning and control, consumer-corporate relationships, dynamics of decision making, and organizational socialization and career development); program evaluation; and professional education (training and internship programs).

Professional Memberships:

Association for Computing Machinery; Institute of Electrical and Electronics Engineers; and the American Psychological Association.

Science and Research Awards From:

U.S. Army "Science and Humanities Award"; National Aeronautics and Space Administration; School for the Outdoors (population ecology); New Jersey State Physics Medal; Westinghouse Honors; National Science Foundation programs at Columbia, Cornell, and Carnegie Mellon; American Chemical Society award; Bausch and Lomb medal.

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Unger, Barry, "A Primer on Regression Artifacts in Ex Post Facto Research," mimeo, 1972.

Unger, Barry, "Organizational Climate and Aroused Motivation," M.I.T. Thesis, 1970.

VITA

Raymond C. Kurzweil
President
Kurzweil Computer Products, Inc.

Education:

1970 Bachelor of Science from the Massachusetts Institute of Technology
Major: Computer Science and Literature.
Scholarships: M.I.T. National Scholarship
Ford Foundation Scholarship
Westinghouse Corporation Scholarship

Management Experience:

1966-1968 (age 18-20)

Created the Select College Consulting Program, a computerized service to match high school students with appropriate colleges. Directed research team of six Harvard students to collect two million items of information on 3,000 colleges and universities. Negotiated sale in 1968 Harcourt, Brace and World (now Harcourt, Brace Jovanovich).

1968 Selected as member of the Undergraduate Special Program at the M.I.T. Sloan School of Business. Twelve students chosen competitively from M.I.T. Sloan School undergraduates. Was selected as the second most qualified applicant; on the basis of business experience and potential.

1969-1973 Vice-President of Select Computer Systems, Inc., a Boston based systems development firm. Engaged in marketing, sales and product development. Designed and directed implementation of interactive inventory system. Directed implementation of entire file management system and higher level language for a new process control computer. Directed implementation of second to third generation computer language translator.

Technical Experience and Honors:

1961 (age 13)
Designed and constructed 4K bit memory system.

1962-1965 Prize for the best project in the field of Electronics and Communications at the International Science Fair in St. Louis, 1965 (one student chosen out of 60,000 students in international competition).

Selection by the National Bureau of Standards as a member of the"High School Graduate Science Honors Group" of 1965, (three students chosen in the United States out of 22,500 students).

Finalist in the Westinghouse Science Talent Search, 1965 (forty students chosen in the United States out of 22,500 students).

First Prize from the Aerospace Education Foundation of the Air Force, 1965 (seven students chosen in the United States out of 60,000 students).

First Prize in the Future Scientists of America Contest, 1965 (twenty students chosen in the United States out of 43,000 students).

Reception by President Johnson at the White House (February, 1965) for scientific accomplishments.

Award from the Patent Law Association for "ingenuity" (four students chosen in the United States out of 60,000 students).

Election as Honor Member to the American Association for the Advancement of Science and the American Institute of Science.

Designed, constructed and programmed a digital computer to compose music and to direct an electronic mouse through a maze, demonstrated on National Network Television.

1966-1968 Founded K&B Associates. Designed and directed implementation of Select College Consulting Program. (See Management Experience).

Publications:

Interactional Analysis of Music, Tech Engineering News, February, 1967.

Automatic Perception of Speech, Tech Engineering News, October, 1966.

Program for the Mann-Whitney and Wilcoxon Tests, IBM 7090/7094 Library.

Program for Data Ranking Operations, IBM 7090/7094 Library.

Program for a One to Four Way Analysis of Variance with Repeated Measures and Unequal Subset Cell Frequencies, IBM 1620/1710 Library.

Computing Tetrachloric Correlation Coefficients with Small N's and Unbalanced Data, Institute for Developmental Studies, July,1965.

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THE INTERNATIONAL COUNCIL FOR EDUCATION OF THE VISUALLY HANDICAPPED

KURZWEIL READING MACHINE INSTALLED AT PERKINS

by
Barry Unger, Executive Vice President
Kurzweil Computer Products, Cambridge, Massachusetts

The first permanent field model of the Kurzweil Reading Machine was recently completed under contract from the Bureau of Education for the Handicapped in the Department of Health, Education, and Welfare (H.E.W.) and installed at Perkins School for the Blind in Watertown, Massachusetts. It will be studied there in its actual use in an educational setting.

The Kurzweil Reading Machine converts ordinary printed materials (books, magazines, correspondence, memoranda, etc.) rapidly into spoken English at approximately 150 words per minute. The machine, which tracks automatically from one line to the next, includes a small computer which is programmed to recognize the letters on the page being read, group the letters into words, compute the pronunciation of each word using over-1000 linguistic rules stored in its memory, and finally, produce the output - electronically created synthetic speech. The machine is operated by the user with a simple control keyboard, which allows the user to take an active role in his reading. He can stop the machine, back up to hear a passage of particular interest over again, he can locate words and have them spelled out, he can cause the machine to skim passages, he can adjust the reading speed or pitch, as well as other control functions.

By allowing easy access to the ordinary inkprint page, the Kurzweil Reading Machine has a potentially significant impact on educational and vocational opportunities for blind persons. The device will allow blind students to read most of the same texts and printed materials as their sighted peers. For blind professionals (such as lawyers, educators, administrators) the reading machine will allow access to journals, memoranda, and reference materials that are vital to the work they perform and to updating their professional skills.

The machine was demonstrated last summer at the national convention of the National Federation of the Blind in Los Angeles, and at the national convention of the Blinded Veterans Association in Philadelphia.

Additional units of the machine are currently being constructed under contracts from the Department of Health, Education, and Welfare, the National Federation of the Blind and the Veterans Administration, and will be placed at sites chosen by these organizations.

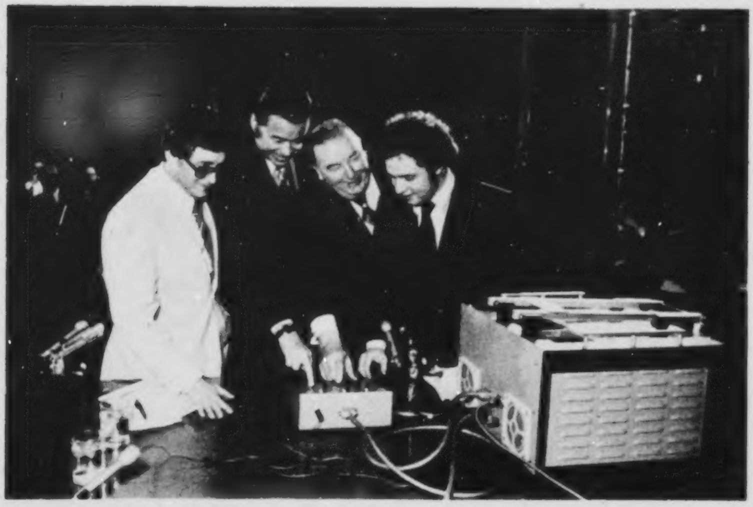
The National Federation of the Blind program is a comprehensive human engineering consumer based study of the reading machine. As part of this study, the NFB will place six reading machines in a variety of user situations, and will report back to the designers the feedback and suggestions for improvement that result from use of these machines. The study will focus particularly on ways in which the machine can be made more responsive to the needs of blind readers - additional user controls, improved physical configuration, problems encountered in use, and so on. The program has been designed and will be implemented and directed by the NFB's scientists and engineers. The funds for this unique program incorporating a new concept of consumer involvement in the design process, have been contributed by five major foundations around the country.

The H.E.W. program includes tests sponsored by the Bureau of Education for the Handicapped (BEH) and the Rehabilitation Services Administration (RSA), both in that department. The BEH program, under which the Perkins placement has been made, is focusing on the use of the reading machine in educational situations, particularly with school-age blind children. Data is being collected concerning the use of the machine, and the machine will be improved on the basis of this feedback from blind children and their teachers. The RSA program will focus on the use of the reading machine by blind adults in vocational situations and will provide feedback from blind consumers and rehabilitation specialists. Additionally, the Massachusetts Commission for the Blind has ordered a test unit to be used by blind staff in their headquarters office, and this too will provide information on the usage of the machine.

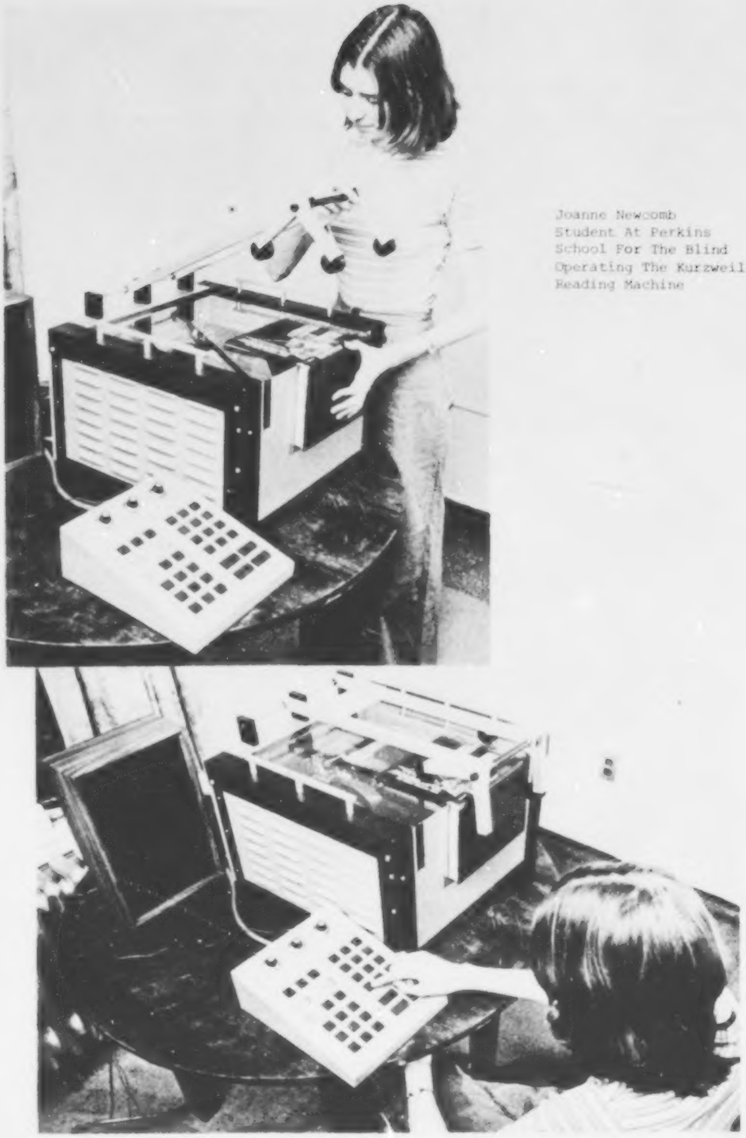
The Veterans Administration program will test the reading machine with Blinded Veterans, and will seek to improve the device based on the reading needs of this population. The program has been organized at the request of the national Blinded Veterans Association.

Dr. Martin Whiteman, professor of psychology at Columbia University, has done initial tests of the reading machine with a small group of adolescent students from Perkins and the Boston Public Schools. This study, which was sponsored by the Bureau of Education for the Handicapped, demonstrated that within a few hours of exposure to the machine, students comprehension of the machine speech improved significantly, to a level roughly equivalent to that of natural speech. These preliminary results are currently being followed up by more extensive tests at Perkins.

Perkins' Guidance Director, Carl J. Davis is collaborating with Kurzweil's Education Research Specialist Jean H. Zellmann and Bernice Shapiro on this project. Further information about the Kurzweil Reading Machine may be obtained by writing to Barry Unger, Executive Vice President, Kurzweil Computer Products, 68 Rogers Street, Cambridge, Massachusetts, 02142.



SENATOR RANDOLPH, CHAIRMAN OF THE SUBCOMMITTEE, AND SENATOR BROOKE (MASSACHUSETTS) OPERATE KURZWEIL READING MACHINE WHILE RAYMOND KURZWEIL, PRESIDENT OF KURZWEIL COMPUTER PRODUCTS, INC., AND BARRY UNGER, EXECUTIVE VICE-PRESIDENT OF THE COMPANY, LOOK ON.



Joanne Newcomb
Student At Perkins
School For The Blind
Operating The Kurzweil
Reading Machine

ADDITIONAL PREPARED STATEMENT

JOINT STATEMENT OF BARRY UNGER, EXECUTIVE VICE-PRESIDENT, KURZWEIL COMPUTER PRODUCTS, INC. AND RAYMOND C. KURZWEIL, PRESIDENT

We would like to thank the many persons who have made significant contributions to the development of the reading machine. Like most large projects, the efforts of many persons working together in a variety of fields has been required.

At Kurzweil Computer Products, Inc., this has included, in addition to those testifying today: Mr. Aaron Kleiner, Executive Vice-President; Mr. Allen Becker, Chief Engineer; Mr. Harry George, Controller; Mr. David Boucher, Director of Production and Purchasing; Mr. Richard Brown, Head of the Software Development Team; Mr. Randall Stern, Software Designer; Mr. Stephen Pelletier, Software Designer; Mr. Greg Mott, Software Designer; Mr. Robert Walton, Systems Designer; Mr. Jasper Bogosian, Electrical Engineer; Ms. Bernice Shapiro, Senior Research Associate; Ms. Jane H. Zellmann, Program Development Specialist; Ms. Joyce Meryl Holzman, Administrative Assistant; Ms. Suzanne Becker, Image Collector; Mr. Edward Clark, Production Designer; Mr. George Random, Optical Consultant; Mr. Arthur D. Larson, Financial Advisor; Dr. Martin Whiteman, Director of Testing; Martin Schneider, Information Requests; Aliya Kleiner, General Assistant; Michelle Unger, General Assistant.

The company's project officers, Mr. John Davis and Dr. Allen Dittmann of the Bureau of Education for the Handicapped (BEH), and Mr. Richard LeClair of the Rehabilitation Services Administration (RSA), have provided a great deal of specific assistance in many areas. The following persons have also worked closely with the company, and have assisted the project in a variety of ways: Dr. Max Mueller (BEH), Ms. Josephine Taylor (BEH), Dr. Edwin Martin (BEH), Dr. Joseph Traub (RSA), Dr. James Garrett (RSA), Dr. Douglas McFarland (RSA), Mr. George Magers (RSA), Dr. Andrew Adams (RSA), Dr. Eugene Murphy (VA), Mr. Howard Freiberger (VA), Dr. Newcomb (VA), Dr. Richard Evenson (Library of Congress), and Dr. Frank Kurt Cylke (Library of Congress).

The following persons have worked closely with the company on the unique consumer testing program of the reading machine being conducted by the National Federation of the Blind: Dr. Kenneth Jernigan, President; Mr. James Gashel, Chief, Washington Office; Mr. Curtis Willoughby; and Mr. Michael B. Hingson.

We would also like to acknowledge the interest and assistance of Jerry R. Monroe, National President of the Blinded Veterans Association.

An advisory group has been assisting the company on issues concerning priorities for development and evaluation efforts, machine modifications, evaluation procedures and teaching methods. The advisory group included representatives of the blind, professionals in education of blind children, professionals in rehabilitation, rehabilitation engineers, experts on testing, and experts in the area of reading for the blind. The members are Mr. John F. Mungovan, former Commissioner, Massachusetts Commission for the Blind; Mr. Carl J. Davis, Head of the Department of Psychology and Guidance, Perkins School for the Blind; Dr. Derek Rowell, Director, M.I.T. Sensory Aids Evaluation and Development Center; Mr. Jerry Monroe, National President, Blinded Veterans Association;

Dr. Martha Ross Redden, Director, Project on the Handicapped in Science, American Association for the Advancement of Science; Ms. Mary Keefe, Supervisor, Vision Resources, Boston Public Schools: Dr. Hadi Madjid, Senior Economist, Arthur D. Little, Inc., member of the Board of Directors, Carroll Rehabilitation Center for the Blind, Trustee, Boston Biomedical Research Institute; Dr. Leonard Diller, Chief, Behavioral Science, Institute of Rehabilitation Medicine, New York University Medical Center, Professor of Clinical Rehabilitation, New York University; Dr. Carson Nowlan, Vice-President, American Printing House for the Blind: Ms. Sharon R. Strzalkowski, Former Research Assistant, Office for Handicapped Individuals. The National Federation of the Blind has agreed to serve as an advisory organization, with James Gashel, Chief, Washington Office, as liaison. Mr. John Davis (BEH) and Mr. George Magers (RSA) serve as ex-officio members of the advisory group.

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE MASSACHUSETTS 02139

February 7, 1977
Room 36-575

Received
2/10/77

Hon. Jennings Rardolph
Chairman: Subcommittee on the Handicapped
Committee on Labor and Public Welfare
4230 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Randolph:

I am writing in connection with the Technology for the Handicapped Hearing of your subcommittee on Tuesday February 8, 1977. I understand that there will be a presentation of the Kurzweil Reading Machine at that time, that there will be an enthusiastic show of support for this device by NFB members, and that legislation to aid dissemination of the Kurzweil machine will be discussed. The purpose of this letter is to ask that my comments, contained herein, be entered into the record of the hearing. The enclosed paper indicates my work in conversion of text to speech, and hence my credentials as a major researcher in the field, which leads me to my comments.

I believe it is premature to disseminate the Kurzweil Reading Machine. While it is the only reading machine available, it utilizes commercially available (Votrax) voice synthesis equipment which is of marginal quality. Much better quality can be produced now and can be expected in economical form within two years. I'm sure that other experts such as Dr. James Flanagan (Bell Telephone Laboratories) and Dr. Frank Cooper (Haskins Laboratories) would concur in this judgment. So it appears wise to avoid hasty commitment to the Kurzweil design. Also, under sponsorship by NSF (RANN), Telesensory Systems Inc. (Palo Alto, Calif.) is developing a reading machine using speech synthesis techniques developed here at M.I.T. in my laboratory and by Dr. Dennis Klatt. Even now, I believe this synthetic speech is considered the best available. While the Telesensory Systems machine will not be available for probably two years, it will provide another design to compare with the Kurzweil machine.

At this time, there has been almost no evaluation of the Kurzweil machine outside the Kurzweil factory. The first machine to be shipped (to Perkins Institute) has been in service in the field for only a few months, and no formal evaluation has been released.

We can be pleased with the presence of the Kurzweil machine and its promise of substantial aid to the blind, but in light of the lack of completed evaluation and the emergence of a competitive design, by a company of proven performance, utilizing more advanced speech synthesis technology, it seems wise to avoid hasty deployment of the Kurzweil device despite the enthusiastic support of parts of the blindness community.

Sincerely yours,

Jonathan Allen
Professor of Electrical Engineering
and Computer Science
Associate Director, Research Laboratory
of Electronics

JA:hc

PROCEEDINGS OF THE IEEE, VOL. 64, NO. 4, APRIL 1976 433

Synthesis of Speech from Unrestricted Text

JONATHAN ALLEN, MEMBER, IEEE

Abstract—For many applications, it is desirable to be able to convert arbitrary English text to natural and intelligible sounding speech. This transformation between two surface forms is facilitated by first obtaining the common underlying abstract linguistic representation which relates to both text and speech surface representations. Calculation of these abstract bases then permits proper selection of phonetic segments, lexical stress, juncture, and sentence-level stress and intonation. The resulting system serves as a model for the cognitive process of reading aloud, and also as a stable practical means for providing speech output in a broad class of computer-based systems.

I. INTRODUCTION

AS COMPUTERS become increasingly ubiquitous in nearly all segments of society, the need for pleasant easy-to-learn reliable communication between these machines and their human users assumes a great importance. There has been a clear trend over the past 25 years for the computer to bend increasingly to the needs of the user, and this accommodation must continue to grow if computers are to be useful to a large part of society. Thus early computers were coded directly in binary or octal words, then assembly languages were introduced, leading to higher level languages which free the user from the need to understand many details of a computer. Today, attempts are being made to allow the user to define his problem directly in natural language, so that an automatic programming system must be able to convert this user-oriented

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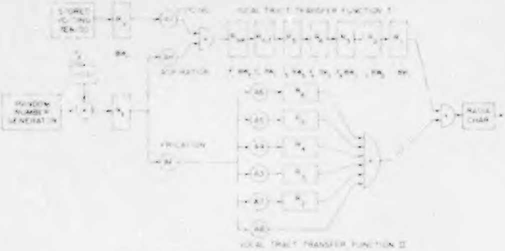

Fig. 1. Tuned resonance vocal-tract model (Klatt [1]).

problem specification to a complete program which can be run on a computer. There seems to be no doubt that natural language will continue to be the desired input-output medium for computers, and a broad level of activity is directed to many facets of this task. We can think of natural language as being expressed in two major representations: text and speech. Text is widely used for both computer input and output, but it requires specialized equipment, as well as skills (such as typing and reading) which many users do not have. By contrast, speech can be used directly over the nearly universal switched telephone network, and requires little or no training on the part of the user. It also gives a humanizing quality to computer-based systems which is increasingly desired.

In this paper, we will concentrate on speech output from computers. Other papers in this issue will consider speech recognition and speaker identification. There are many applications for speech from computers, and these determine the range of techniques that are needed. For the simplest cases, requiring only the use of a small vocabulary in rigid message formats (e.g., stock quotations), human speech can be recorded in either analog or digital form and appropriately accessed for the desired message. In this way, high-quality speech is obtained, but the range of outputs is limited. The technology relevant to these schemes involves the provision of economical storage coupled with fast and flexible access. Relatively little speech processing is performed at the expense of substantial memory requirements for appreciable vocabularies. Such systems represent one end of the space-time tradeoff, and since they emphasize storage of (possibly recoded) speech waveforms, they do not require use of phonetic or linguistic constraints.

When it is desired to produce a wider variety of phrases and sentences, a point is reached where it is no longer feasible to store all of these messages, and the required output must be constructed from smaller elements, such as morphs, words, or phrases. Unfortunately, it is not possible to simply concatenate recorded speech directly (e.g., to make a sentence from recorded words), due to word boundary effects, allophonic and stress variations within words, and changes in timing and pitch determined by the overall sentence structure. We see, then, that when flexibility to *construct* utterances from smaller units is required, we must revert to a more abstract representation of these units, which permits the relevant speech parameters which are affected by the structure of the complete messages to be changed by a set of rules. Such a scheme requires less memory per utterance than recorded speech schemes, but demands a parameterized representation of the speech units to be used, together with a set of rules to compute these parameters over the length of the utterance.

II. Vocal-Tract Models

A great deal of study has been devoted to structural models which produce output speech waveforms from a small slowly varying set of input parameters. Historically, the first such models represented the vocal tract as a set of coupled resonances, driven by two possible source functions, one for glottal pulses and the other for fricative noise. An example of such a model, due to Klatt [1], is shown in Fig. 1. The advantage of these models is that they relate directly to many of the research results in acoustic phonetics, so that it has been relatively easy to determine the parameters needed to synthesize any particular speech segment. This is *not* to say that the determination of compact, insightful, linguistically relevant rules to compute these parameters has been easy, (this is still a topic of current research), but only that the model is adequate to produce speech which is indistinguishable from human speech, as shown by Holmes [2]. The problems associated with speech produced by such a model are thus associated with the determination of the parameters (often by rule) rather than inadequacies of the model itself.

Although it is more difficult to obtain the relevant parametric data, articulatory models of the vocal tract can provide very natural structural representations of the underlying anatomy and physiology of the vocal tract which give rise to the speech signal. Much of the needed data for vocal tract shape, tongue movement, and velar opening has been derived from relatively sparse X-ray data, but many effects of coarticulation, vowel reduction, and place allophones are produced automatically, without the need for special rules. Fig. 2 shows an articulatory model due to Coker [3], which requires control of glottal opening, velar opening, tongue mass and tongue tip position, plus lip and jaw position.

Modeling of the glottal source has also been achieved in articulatory terms. Recently, for example Flanagan *et al.* [4] have devised a model for the vocal cords which accounts for many of the subtle timing effects in voicing. The movement of the cords is very complex, as has been demonstrated by Baer [5], and continued work will be required, as with all synthesis models, to account for a wide range of phenomena arising from diffuse interactions between many factors.

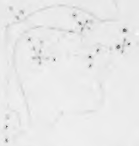

Fig. 2. Articulatory vocal-tract model (Coker [3]).

The importance of vocal tract models, whatever form they may take, is twofold. First, they allow a substantial reduction in the amount of data needed to specify a speech waveform. In this way, storage requirements for speech are diminished at the price of increased computation, both to obtain the parameters from given speech samples, and to recreate the speech waveform at some later time from these parameters. Secondly, the models provide a structural framework in terms of which speech phenomena can be insightfully, economically, and naturally specified. These frameworks also suggest the class of experimental results which are needed to support the various models. Useful models for speech synthesis at all levels retain these two properties. The goals of research in synthesis can thus be both the construction of sound engineering solutions to problems which require a wide range of synthetic speech utterances, as well as the furthering of basic knowledge of the speech process. In the remainder of this paper, it will be seen that structural models at several levels, reflecting articulatory, distributional, word formation, syntactic, and semantic constraints are needed, coordinated by a flexible control structure which provides for interaction between these structures. In the sequel, we will assume that the output speech is to be in terms of some parameterized model economically representing vocal tract constraints. The goal of a text-to-speech system must then be to convert the input text to a transcription (which may be thought of as analogous to commands to the vocal tract musculature) which uniquely determines the state of the model. It is most natural to discuss the derivation of these vocal tract model parameters in terms of two groups of interacting structures. First, we will describe synthesis at the single word level, where morphological, syntactic, orthographic, and stress effects all interact to determine the phonetic output. Then a second group of factors which operate at a higher level above the word will be considered, which determine pitch, timing, and junctural effects. These factors include syntax, semantics, and discourse-level constraints, which we will unify in terms of a functional model of language structure.

III. Word-Level Synthesis

Up to this point, we have described structural models which abstracted on the speech signal to provide an underlying framework which can generate the signal from a much simpler and more natural specification in terms of a slowly varying set of parameters. Knowing what these control parameters are, we now start from the other end of a text-to-speech system, i.e., the input text, and inquire how these parameters can be computed from the text. At first, we restrict our attention to the synthesis of single words.

The simplest way to obtain the vocal tract control parameters is by table lookup, which is satisfactory for small vocabularies. For vocoders where there is only a requirement for economical representation of speech waveforms, a sequence of vocal-tract parameters is also used to represent the speech signal. But when unrestricted text is to be the input, then table lookup will obviously not work, and it is clearly most desirable to place no restrictions on the text. When we remove all limitations on the input, then what we require is no less than a cognitive model for reading aloud. That is, we must discover and represent those procedures which humans use to pronounce these text tokens which they encounter while reading.

The task of converting unrestricted text to speech is both broad and complex. Any English text should be allowable as input. This means that all the words of a language must be recognized. Not only is there a large number of such words, but they are constantly changing with time. For example, "earthrise" and "cranapple" are recently coined words, so that even if a very large memory were available, it could never contain a complete lexicon. Nevertheless, literate humans effortlessly perform the conversion of arbitrary words in text to speech, so advantage must be taken of the linguistic regularity in both orthography and speech which native speakers rely on. For while the types of words and utterances which are used can change quickly over time, the underlying rules which generate them change only at a very slow rate, so it is these relatively stable rules which must be discovered and used. Hence, we must first determine the underlying abstract linguistic description of the text, and then devise rules which will infer the phonetic description from this base. This procedure works just because *both* text and speech are surface representations of the *same* underlying linguistic specification, so the conversion from one form to another can best be performed by analysis into the linguistic structure followed by synthesis from that structure to the alternative surface representation. While such an indirect procedure may at first seem needlessly involved, many ad hoc rules are avoided and an infinite range of phenomena can be insightfully described by a concise set of comprehensive rules.

IV. Word Structure

The given input text is assumed to include word boundary information, so words are convenient units to start the conversion process of a sentence text to speech. We have already seen that a complete word dictionary is impossible. Fortunately, however, many English words have internal structure, made up of atomic units called morphs. On the average, there are slightly less than two morphs per word in English. These morphs include prefixes (con-, be-, mini-), derivational suffixes which affect the meaning of the word (-dom, -ness, -ship, -al), and inflectional suffixes, which affect the grammatical role of a word (-s, -ed, -ing). In addition, there are root morphs of two kinds: free morphs which can stand alone (snow, boat, house) and bound morphs which must combine with an adjacent morph (-turb, -ceive, crimin-, -pel). All English words are made up from combinations of these units. The processes by which this occurs are compounding, where two roots are concatenated (houseboat, snowplow, uplift), and affixation, where prefixes or suffixes are attached to roots (enable, receive, kindnesses, affixation). Representation of words in terms of their constituent morphemes has several advantages. The number of morphs in English (approximately 12 000) is at least an order of magnitude less than the number of words in the language, so that a morph lexicon is possible and provides an economical basis for representing a large number of words. Just as important, however, is the fact that these morphs are stable in time, and that many new words (e.g., "earthrise") are coined by selecting appropriate morphs with the desired semantic content.

In order to make use of these morphs, two ingredients are needed. One is a morph dictionary, and the second is a procedure for discovering the constituent morphs of words. Any straightforward attempt to reveal morphs in words is complicated by two factors. The first is that English vocalic suffixes (those that start with a vowel) often change the root to which they attach. This can happen in three major ways (as well as several marginal processes). A final silent "e" can be dropped, as choke + ing → choking; a consonant can be doubled, as pit + ed → pitted; or "y" can change to "i", as city + es → cities. Lee [6] has developed techniques for decomposing words into their constituent morphs in such a way as to "undo" the mutations caused by vocalic suffixes. Essentially, his algorithm uses a recursive longest match-first from the right end of the word to successively detect the morphs of a word in sequence. Thus the three examples just cited, as well as a vast number of additional words, are correctly decomposed. More recently, however, Allen [7] has shown that the straightforward decomposition procedures proposed by Lee must be augmented by a set of selection rules. All possible decompositions are first obtained, and then the correct one is selected by these rules. For instance,

$$\text{scarcity} \longrightarrow \begin{array}{l} \text{scar} + \text{city} \\ \text{scarce} + \text{ity} \\ \text{scar} + \text{cite} + \text{y} \end{array}$$

by the recursive decomposition process. The selection rules take these candidates two-at-a-time, and pick a "winner" from each such pair. Thus "scarce + ity" is preferred over "scar + city" because affixation is preferred (it represents a "tighter" binding) to compounding. This winner must next be compared to "scar + cite + y", which will be rejected since, although it is an affixed form, it is also a compound, and the rules will retain "scarce + ity" as the winner. It is interesting to note that in the first pair considered, the mutated form was preferred over the directly concantenated form, which might be expected to be more easily detected by readers. The selection rules are also useful when there are no mutating effects, such as

$$\text{resting} \longrightarrow \begin{array}{l} \text{rest} + \text{ing} \\ \text{re} + \text{sting} \end{array}$$

In this case, inflectional affixation (-ing) is preferred over derivational affixation (re-) and the correct choice is selected. The status of these rules is enhanced by noting that they operate at the level of the abstract underlying morphemes, and are thus useful for dealing with strong forms. Hence wounded → wound + ed, but "wound" has two pronunciations. There are *bloody* wounds, and string can be *wound* on a ball, but in the latter case, wound = wind + PAST. The rules pick the correct pronunciation since it involves only one inflectional affix, whereas the other case has two underlying inflections (i.e., wind + *PAST* + *ed*).

These morph analysis procedures will not, of course, be useful unless they can be used in conjunction with a comprehensive morph lexicon which is capable of providing the content for a morph analysis of a large representative corpus of English text. Such a dictionary has been obtained by Allen [8], who decomposed the entire Brown Corpus [9] of 1 014 232 words (50 406 distinct words) of running text. The result is a morph lexicon of approximately 12 000 entries, sufficient to generate at least ten times that number of English words.

V. Letter-to-Sound Rules

We have described how words may be analyzed into their constituent morphs, but clearly, a complete morphemic representation will not always be possible. This is analogous to the situation of a native speaker when he neither recognizes a word in its entirety, nor represents the word as a concatenated sequence of morphemes. Certainly, the high-frequency words of the language will be recognized as a unit, but when words become less frequent in usage, they must either be recognized as a sequence of familiar morphs, or they must be "sounded out" by means of direct letter-to-sound correspondence rules. We have already explained how the first two cases can be handled. Either the word is found in the lexicon, or it is decomposed into a sequence of dictionary morphs. When neither of these two schemes is successful, letter-to-sound rules must be used. It is important to realize, however, that an attempt must always be made to first represent a word by a string of dictionary morphs. There are two reasons for this procedure. First, only the high-frequency words of the language can resist the tendency to conform to the regular rules of the language. Thus the letter "f" is always pronounced /f/ in the 20 000 most frequent words of English, except for the single case "of". Similarly, initial "th" is voiced (/ð/) in high-frequency function words (this, there, them, the), but unvoiced (/θ/) in lower frequency words (thirst, thesis, thigh). (Curiously, "thy, thou" and "thine" are holdovers from previous high frequency usage.) Lastly, a comparison of "behave" with "have" shows that the latter word does not follow the general rule that a final silent "e" makes the previous vowel long, or tense. Any attempt to compute the sound representation of these frequent words will needlessly complicate any set of letter-to-sound rules. A better approach is to place all such exceptions directly in the lexicon, so that no attempt is ever made to convert their letter strings to sound units by rule.

There is a second reason why dictionary lookup must be attempted before letter-to-sound rules are applied. When words have internal structure, letter strings which appear to be clusters may be broken up. Thus "hothouse" has a medial "th" string, but it is not a functioning cluster, as in "earth". Similarly, "changeable" has a medial "ea" string, but it is not the cluster "ea" found in words such as "reach, tear, leather, search." Any attempt to convert the word "houseboat" to sound must recognize that the word contains two morphs, and that the medial "e" is silent. Without this information, the "e" would be pronounced, as in "assembly." It is clear from these examples that letter-to-sound rules can only be expected to apply within morph boundaries.

Foreign words which retain their original pronunciation must be placed in the morph lexicon, just as a native speaker of English must memorize their special pronunciation. If this is not done, then the letter-to-sound rules will subject the word to rules which are appropriate for English, and strange results may ensue, such as the pronunciation of "coq au vin" as though it was written "cocoa veen."

Referring to Fig. 3, it is seen that all words are first processed by the dictionary lookup scheme. The given word may thus be found to be "covered" by one or more morphs in the lexicon. If such a covering cannot be found, then the lookup

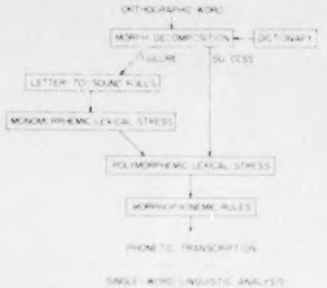

Fig. 3. Single word text-to-speech system.

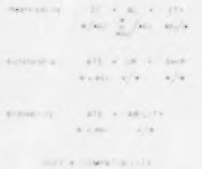

Fig. 4. Suffix syntactic compatibility.

attempt fails, and the word must be converted to sound by the letter-to-sound rules. Unfortunately, there are many words for which a complete morph covering is not obtainable (usually because the root morph of the word is not in the lexicon) even though they are clearly polymorphemic. In these cases, an attempt must be made to strip off affixes. In general, however, this cannot be done reliably. For example, corpuscular = co + rpuscular or cor + puscular, but for different reasons relating to the structure of the language. In the first case, the stripping of "co-" is not allowed, since initial "rp" is not an allowable cluster in English. The prefix "cor-" as in "correlate," is restricted to attach only to those root morphs starting with "r". Both of these cases are dealt with by sequential redundancy rules of the language, which dictate, in part, the allowable letter and sound sequences.

In addition to the sequential redundancy rules, there are rules based on the allowable sequence of suffixes, as determined by their parts-of-speech effect. A chain of suffixes must be syntactically compatible, as shown in Fig. 4. Thus for the word "dictatorship," the terminal suffix "-ship" forms nouns and attaches to nouns, as in "kinship." The suffix "-or" forms the noun needed by "-ship," and requires a verb to its left. Finally, the suffix "-ate" can form either a noun, verb, or adjective (as in "directorate, dictate," and "dentate"), so "-or" can attach to it. The remainder of the word is "dict-," and it is assumed that no syntactic information is available about it. Fig. 4 also shows two other examples of the use of sequential syntactic constraints, and they follow the same type of analysis as for "dictatorship." These compatibility tests may also be used to reject suffix candidates as well as to confirm them. For example, scandalousness = scand + al + ous + ness might be postulated. But while "-ness" forms nouns from adjectives, and "-ous" produces adjectives from nouns, "-al" forms adjectives, so the analysis is rejected.

By means of the sequential tests described, any word presented to the letter-to-sound processor is first stripped of all its affixes. For each of these affixes, there is a (morph) dictionary entry giving its pronunciation, part-of-speech information, and its effect on word stress. The remaining letter string is then assumed to be monomorphemic and hence acceptable as input to the letter-to-sound rules.

Once the affix-stripping process has been completed, the remnant is subjected to two letter-to-sound conversion procedures. These constitute several hundred rules, and have been developed and extensively tested by Hunnicutt [10]. The first process converts all consonant letters to phonetic symbols, since consonant correspondences are fairly regular, and then the second process converts the vowels, so that maximal context (both orthographic and phonetic) is available for the conversion of these vowels.

Fig. 5 shows three examples of letter-to-sound rule application. In the first word, "table," no affixes can be stripped off, and straightforward table lookup provides the phonetic segments for [t] and [b]. The letter [l], however, precedes morph-final [e] and is preceded by another consonant, [b]. In this context, [l] is syllabic. At this stage, we begin the vowel conversion process. The sequence [ble] forms the right context for [a]. All vowels except [e], if located in the first syllable of a morph, are long if followed by the sequence "non-vocalic consonant (i.e., not [r] or [l]) - [l] - [e] - word boundary." (For example, "maple, bible, bugle," but "triple" is an exception.) This rule is sufficient to convert [a] to /e/. Finally, the terminal letter [e] is morph-final and silent.

The second word, "subversion," undergoes affix-stripping first to remove "sub-" and "-ion." Note that the [s] before the suffix "-ion" is not removed as a suffix, since it is not in word-final position. Similarly, the string [er] before this [s] is not removed as a suffix. There is only one pronunciation for [v], and [r] does not fit a specified context for syllabic [r]. In the case of [s], however, it is followed by the sequence "+[i]-vowel," making it a candidate for palatalization. When an [s] preceding this sequence is preceded by either a vowel or an [r], it is usually pronounced /ʒ/. (For example, "revision, artesian, Persian," while "torsion" and "controversial" are exceptions.) The consonants have now been converted, so it remains to convert the vowels. There is only one vowel in the central root, [e], and it becomes /ɚ/ which is dictated by the right context "[r]-consonant (not [r])" (that is, [r] followed by a consonant which is not [r].) Pronunciations for "sub" and "ion" are retrieved from the lexicon, after noting the palatalized left context for "-ion."

Lastly, we consider "science." First "-ence" is detached. Although "-ience" is a possible suffix, the remnant would have no syllabic nucleus, so is not recognized. Because [sc] is morph-initial, it is not palatalized, and the pronunciation of [i] preceding a vowel as /ai/ follows from its position as either morph-initial (e.g., "iota") or immediately succeeding a morph-initial consonant cluster (e.g., "giant").

By means of the letter-to-sound rules, a wide variety of words can be "sounded out." It is important to realize that not only can existing English words be converted, but invented

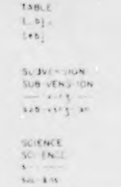

Fig. 5. Letter-to-sound conversion.

words which follow the rules of the language may also be processed. Thus Lewis Carroll's "Jabberwocky" can be "read" by such algorithms, complete with such nonsense words as "brillig." Those who have trouble remembering "i before e except after c" may be relieved to know that the letter-to-sound rules will treat them kindly. For example, perceive → per + ceive by the morph analysis program. But if the input is "percieve," morph analysis will fail, but the letter-to-sound rules will remove "per-" and sound out "-cieve" to give the correct pronunciation. In this way, these procedures can naturally recover from many spelling errors, which is very desirable in many applications.

Since so many monomorphemic words can be processed by the letter-to-sound rules, it would clearly be possible to remove the pronunciations from the morph lexicon for many of these morphs. This is an engineering consideration, and depends on the relative cost of memory versus real-time computation. At present, existing processing configurations favor the use of memory.

The letter-to-sound rules form a very complex system. The examples have given some hint of the many considerations that are involved. Perhaps the vowel digraphs have presented the biggest problem. There are no fewer than 14 pronunciations of the digraph [ea], and an ordered set of rules is able to specify the correct one. Hence these rules are comprehensive in their coverage, but it must be emphasized that it is impossible to evaluate them without knowledge of the associated lexicon (which contains the high frequency exceptions) and morph analyzer (which reveals morph boundaries in the letter string). Only in the context of a complete word-level text-to-speech conversion algorithm can letter-to-sound rules be specified.

VI. MORPHOPHONEMIC AND LEXICAL STRESS RULES

At this stage, we may consider that any given word has been broken up into a sequence of morphs, and that for each of these morphs a phonetic transcription has been obtained, either from the morph lexicon, or by means of the letter-to-sound rules. It is not possible, however, to merely concatenate these phonetic symbols to obtain a phonetic specification for the entire word. Instead, there are two kinds of adjustment rules which are needed to obtain the correct phonemes. The first kind of effect is specified by morphophonemic redundancy rules, as shown in Fig. 6. The first two cases show that the underlying inflectional affixes for PAST and PLURAL are realized in surface phonetic form by examining the phoneme to which they attach. Thus it is unnecessary to specify *any* pronunciations for the affixes "es," "s," and "ed," since these can be computed by rule. Fig. 6 shows that PLURAL is realized by one of three possible sets of phonemes, depending on the left context. If the left phoneme is a fricative "close" in place of articulation to /s/, then PLURAL → /ɪz/. Otherwise the result is /s/ or /z/, in accordance with the voicing of the left context. A similar analysis applies to PAST. The last set of contextual effects shown in Fig. 6 deals with more complicated effects. The suffixes "-ion" and "-ure" are distinctive in that when they attach to one of a certain class of palatal consonants, that consonant changes to a related fricative, and the /i/ or /y/ initial phoneme of the affix is lost. Thus in aggress + ion → aggression, the /s/ changes to /ʃ/ and the /i/ of "-ion" is deleted. Note that when palatalization is not triggered, as in "rebellion," the final phoneme of "rebel" is not changed, nor does the /i/ of "-ion" drop. A similar analysis applies to the words that end in the affix "-ure."

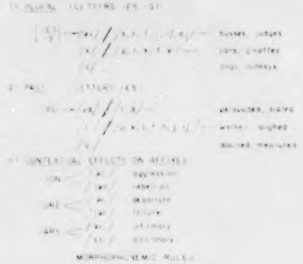

Fig. 6. Morphophonemic rules.

In the case of the affix "-ary" shown in Fig. 6, it is seen that there is a pronunciation shift even though the left phonemic contexts are similar (/m/ and /n/) in the words "infirmary" and "dictionary." This is due to lexical stress effects. Given the constituent morphs of a word, the stress contour must be computed, both to ensure the intelligibility of the word, and to derive vowel reduction effects, as shown by the "-ary" examples. One of the major achievements of modern phonology has been the development of lexical stress rules [11] of broad generality. A simple example of these rules is shown in Fig. 7, where the stress of bisyllabic words is shown to shift, depending on the tenseness of the final vowel. When the final vowel is tense, stress is retained on the final syllable, and the vowel of the initial syllable is reduced, as shown in the examples. When the final vowel is lax (-tense), however, stress is passed on to the first syllable, even though its vowel may be lax. There is a complicated set of such rules needed to describe English stress, and they have been successfully expressed in algorithmic form, thus obviating the need for placing many words in the lexicon where stress shifts are predictable. The stress shifts in "felon/felonious" and "chaste/chastity" are examples of the lexical savings which the stress rules provide. These two word pairs show that suffixes can have a strong effect on the roots to which they attach. A comprehensive set of rules dealing with these effects has been provided by Hunnicutt [10]. Some suffixes retain main stress on the suffix, as "-ee, -eer, -ade, -self" in "trainee, mountaineer, lemonade," and "himself," while others place stress on the first vowel preceding the suffix, as "-ic, -ial" in "humanistic and "reverential." There are six

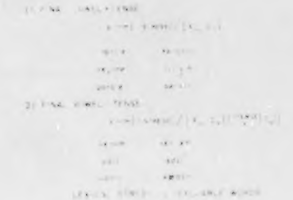

Fig. 7. Lexical stress rule.

classes of suffixes needed to treat all the cases which arise. To see the range of vowel color changes which can be computed, consider the three words "systemate, systematic, systematize." (The first "word," "systemate," does not exist in English, but there is no phonological reason to exclude it.) Notice that in each of these three words, the suffix "-ate" is present, but that in each instance it has a different pronunciation. All of these variations are computable by rule. The fact that many seemingly random changes in vowels and stress can be predicted indicates not only the power of current lexical stress rules, but the reality of the morph as a linguistic unit.

The morphophonemic and lexical stress rules provide the final word-level adjustments to the phonetic strings supplied by the dictionary or letter-to-sound rules. Referring back to Fig. 3, we have described a complete process for obtaining the phonetic description of any English word given in text form. All the procedures described have been implemented on a small computer and coupled to a phonemic synthesis-by-rule scheme. In this way, words may be typed in and immediately converted to speech. The system has been tested over a wide variety of words and found to reflect adequately the native speaker's competence in reading aloud at the word level. The way in which the algorithms interact shows that neither dictionary nor letter-to-sound rules by themselves are adequate to convert text to speech, but that *both* are required in a carefully controlled manner in order to exploit properly the regularities of the language. Such a view provides an explicit context in which to view the reading process, and the content of these algorithms should be useful to those responsible for the elementary school teaching of reading skills.

VII. SENTENCE-LEVEL SYNTHESIS

Since we have already shown how individual words can be converted to speech, it would be tempting to merely concatenate the words of a sentence together in order to produce a sentence in speech. Just as this did not work at the morphemic level, however, it will not work at the sentence level. Every level of linguistic structure manifests itself in some set of acoustic correlates, and as words are joined to produce compounds ("bus stop"), phrases ("the old man"), and clauses ("who lived in the house"), we can expect each of these structures to control the parameters of the acoustic output in prescribed ways. Unfortunately, far more is known about word-level phenomena than phrase- and clause-level effects. This is in part due to the infinite number of such higher-level constructs, which makes systematic experimentation very difficult. Troubles also arise as a result of the unsettled status of syntactic and semantic description, and from the stylistic mannerisms applied by speakers. The task at the sentence level is nothing less than to determine (from the given text) the syntactic and semantic content of the speaker's intent, as manifested in the sentence text, and from these derived structures to compute the corresponding acoustic information which must supplement and modify the information produced by the word-level analysis. For example, parsing can be used to resolve part-of-speech ambiguities, as in "refuse," "survey," and "separate," which change their stress and phonemic content depending on their syntactic usage.

It is clear, then, that part of the sentence-level structure needed for text-to-speech conversion is a parse of the sentence which reveals the hierarchical arrangement of the sentential constituents. There is a long history of algorithmic analysis of English sentences to determine their syntactic structure, but since there is no "complete" grammar of English, it is not surprising that no parser has been developed to analyze all possible sentences. Of course, many sentences are syntactically ambiguous, as in "George has plans to leave," which may have the stress on "plans" or "leave." In such cases, information derived from the discourse context must be used to select the correct analysis, but such procedures have been developed only for highly restricted contexts and vocabularies. There are also "garden path" sentences, such as "The boy scouts looked for died," which require backup analysis. Techniques for dealing with this problem are fairly well understood. A more severe problem is that most parsers analyze sentences from left to right, and if they are unable to proceed at some point, they quit, even though easily recognized constituents may lie to the right. In order to deal with this situation, Allen [12] has shown how local phrase-level analysis may first be performed, and then these phrases connected later by clause-level tests. Such a procedure has the advantage that all phrases are first found, even if it is not clear how they should be connected in a complete parse tree, as in "He saw the man in the park with the telescope." To be sure, in some "garden path" sentences the initial phrase-level analysis may be incorrect, but these occur in less than 5 percent of sample corpus sentences, and known clause-level tests are usually successful in correcting the error. The important point is that phrase detector analysis provides a complete *local* analysis of the sentence, so that even if the complete structure of the sentence cannot be obtained, the parsing process fails gracefully and as many recognized phrasal units as possible are obtained. An examination of "real" sentences obtained from a random sample will show the sensibleness of this approach and the impossibility of ever building a syntactic analyzer which gives the "correct" parse for every sentence encountered. In addition, of course, there is the fact that, for many sentences, competent linguists cannot agree on the correct analysis. Thus, the soundest procedure is to proceed hierarchically from phrasal analyses to clause tests so that at least local structures will be revealed if sentence-level analysis is precluded. The current state of the art does allow for phrase detection in unrestricted text, but substantial progress in linguistics and parsing techniques is needed before satisfactory sentence analyses are obtainable over a wide corpus. An example of a parse tree generated by detecting phrases entirely across the sentence before clause level tests are performed is shown in Fig. 8. Current work indicates that a refinement of the syntactic features on the 500 most frequent words of the language can contribute significantly to parsing performance.

Fig. 8. Parse three example, assisted by phrase selection followed by clause selection.

In many cases it may be possible to recognize the constituents of a sentence, and produce a complete surface structural analysis, yet the *functional* or *semantic* role of these constituents may influence the acoustic realization of the sentence in a way not directly predictable from the syntactic structure alone. Compare "The dogs were walked by the river" and "The dogs were walked by their master." Both sentences end with a prepositional phrase, but in the latter case the agent "owner" will receive greater stress than the place adverbial which terminates the former sentence. Or compare "Joe can build the house" with "Joe might build the house," where in the latter sentence the past tense modal "might" receives emphasis in order to mark the speaker's feeling of doubt. Hence the *function* of the syntactic constructs must be determined in order to derive the correct stress. As a third example, consider "She slapped him in the face and then she hit the man." This sentence is not syntactically ambiguous at the surface level, but it has a different meaning depending on whether "hit" or "man" is stressed, and native speakers have no difficulty in detecting the difference.

The kinds of procedures needed to detect functional and semantic distinctions, as described above, are not at all well understood. They depend on the algorithmic use of case notions, pronominal reference, and pragmatic knowledge of the topic under discussion. In the sequel, however, we will show that a functional point of view due to Haliday [13] allows an insightful interpretation of pitch contours to be made. Nevertheless, at this time, no systematic theory has been developed which relates functional and semantic effects to correlates of the speech waveform, although we will indicate a possible direction for such a theory. Most of the current knowledge is tied to simple use of syntactic structures, functional load, as indicated by use frequency, and semantic markers attached to specific lexical items.

VIII. Prosodic Correlates to Linguistic Structure

If we assume that appropriate linguistic analysis of sentence-level structure is available, and that the phonetic representation, including stress, is known for all the words, then algorithms are needed to control several parameters of the synthesized speech. There are word-boundary effects, phrase-level stress contours, and clause-level phenomena which affect the timing, fundamental frequency, and intensity of the speech waveform. These factors are referred to as the suprasegmental or prosodic features of speech. In order to produce intelligible and natural sounding speech, it is necessary to properly control these parameters based on the linguistic content of the sentence or discourse.

Starting at the word boundary, many allophonic effects take place. When phonemes on either side of the boundary have a similar manner of articulation, effects are often present which allow for maintaining the distinctiveness of these phonemes while permitting an allowable articulatory transition. Thus at vowel-vowel transitions (e.g., "delay on"), glottalization or a glottal stop may be introduced if the two vowels are sufficiently close in tongue height in order to preserve the separate distinctiveness of the two vowels [14]. In the compound "bus stop," the two /s/'s must be shortened to produce a correct utterance, and in "stag party," the differing place of articulation of the two stop consonants blocks the release of the first stop and requires a modified closure duration. More generally, consonants at word boundaries tend to be longer than in other contexts. Some morphophonemic rules, such as palatalization, also apply across word boundaries, as in "did you." There are about 25 rules governing these effects, all easily understandable once the dual requirements of phonemic distinctiveness and allowable articulatory sequences are recognized.

When a word boundary also serves as a phrase or clause boundary, these adjustment rules may be suspended in favor of pause insertion. Pauses are particularly needed both before and after relative clauses [15] and in general whenever the normal subject-verb-object temporal progression is disturbed.

Moving into the word from its boundaries, there is an abundance of duration, pitch, and allophonic variation caused by a wide variety of factors. Initial consonants tend to be longer than final consonants, but their durational behavior is most heavily influenced by the presence of clusters. Cluster environments determine the individual consonant durations by a combination of articulatory and phonological constraints, which have recently been extensively studied [16].

Vowel durations are controlled by the intrinsic nature of the vowel, the following consonant or syllable boundary, the number of syllables in the word, the grammatical function of the word, the position of the vowel with respect to syntactic breaks, and the relative frequency of the word (both in the immediate text and in broad usage). These factors interact in a complex way to determine the final duration [17], and the relative changes can be large. For example, the /o/ in "snow" is twice as long in "heavy snow" as in "snow plow," showing that even though the word "snow" carries main stress in both phrases, the grammatical function of compounding causes severe shortening.

Much further work is needed to relate pauses, consonant durations, and vowel durations into an overall strategy for timing. The present state reflects the knowledge of a large number of individual effects, but, while these may be descriptively adequate for certain applications, they are not well integrated into a comprehensive model for temporal control. Consequently, a common criticism of current efforts to synthesize speech is the unnaturalness and lack of intelligibility that results from incorrect timing.

If temporal control presents great problems in the description of speech, then the problems of fundamental frequency (F_0), or pitch control, are at least as difficult. Once again, problems arise due to the fact that f_0 is correlated with many factors, including vowel tongue height, previous consonant, breath group contour, syntactic and semantic content of words, whether a sentence is a question, intonation effects, and word boundary glottalization. Because of the rich functional load carried by f_0, it is very difficult to conduct experiments that will allow the construction of an adequate generative model [18]. Recently, however, by considering the complete function of a text in discourse, Haliday [13] has shown that three major functions are "carried" by a text, and these have been related to pitch contours [19]. The first function is the "ideational" component, whereby a text

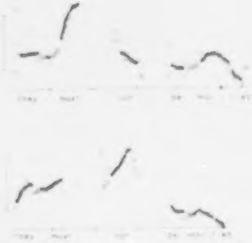

Fig. 9. Pitch contours for two sentences with different meaning, depending on which modal item ("must" or "not") is stressed.

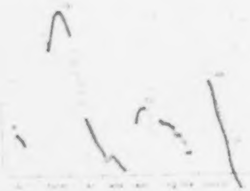

Fig. 10. Pitch contour for declarative sentence, read in isolated citation form.

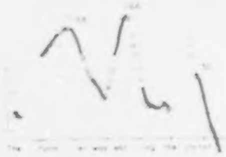

Fig. 11. Pitch contour for the same sentence as in Fig. 10, but read in response to the question, "What was the farmer doing?"

contains the statement of a proposition, as in "Speech synthesis is difficult." But there is also a second "interpersonal" component which characterizes the way in which speakers indicate their belief in the truth value of a proposition. Thus in "John might study speech," the modal auxiliary might is used to indicate doubt on the part of the speaker. Fig. 9 shows an example of the pitch prominence found on such modal items. More generally, past tense modals, negatives (e.g., "not"), sentential adverbs, and quantifiers are also marked in the pitch contour due to their interpersonal effect, since they are used by the speaker to delimit or restrict the basic predication of the sentence. Finally, there is a third "textual" or discourse function, which language possesses. As a result of the sequential arrangement of sentences and the choice of syntactic transformations, relative emphasis, as marked by the pitch contour, can vary considerably. We show two examples of these effects. In Fig. 10, the pitch contour for a declarative sentence, "The farmer was eating the carrot" is shown. When this sentence forms the reply to the question "What was the farmer doing?", the pitch contour changes dramatically, as shown in Fig. 11, in order to emphasize the word "eating," which is the focus of the answer to the question. This example shows that for continuous text, it is impossible to predict the correct pitch contour for a sentence from that sentence alone. Instead, the old/new information relations and discourse focus must be utilized to determine the correct contour. In Fig. 12, an example of clefting (a syntactic transformation) is shown, which clearly marks the pitch contour in such a way as to emphasize the focused item. Again, it is clear that the functional effect of such transformations must be considered in order to derive the correct pitch contour. The discovery and coordination of all of these effects is a large and continuing effort, and it is clear that substantial semantic and discourse-level knowledge is needed to correctly predict prosodic parameters. An important question is the feasibility of algorithmic means to detect these linguistic structures, together with the determination of the pitch contour from the resulting descriptions. The current use of sophisticated means for pitch recording, coupled with increased interaction between linguists and speech researchers, should, however, lead to significantly improved pitch control programs which are based on sound linguistically motivated theory.

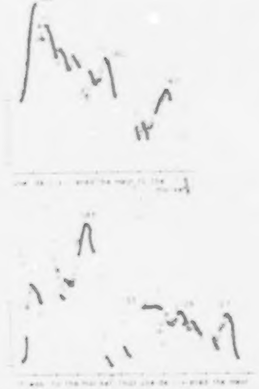

Fig. 12. Pitch contour for declarative sentence, and then clefted transformation of the original sentence.

IX. CONCLUSION

We have now described the linguistic and phonetic processing needed to derive a narrow phonetic specification from a given input text. This description is sufficient to serve as input to a phonemic synthesis system. The overall conversion process from text to speech is seen to be first an *analysis* from the text into a common abstract underlying linguistic specification, followed by a synthesis from the linguistic structure to the surface phonetic realization. The current state of the art is sufficiently developed to permit confidence in the basic form and strategy of this approach, but considerable work remains to integrate currently known facts, perform new experiments, and codify the required procedures into concise and efficient algorithms. Furthermore, when an adequate system has been devised and tested, it must be implemented in an economically attractive form. Current work should lead to LSI implementations of all-digital vocal tract models which are both compact and inexpensive. Following this achievement, it seems reasonable to expect that a complete text-to-speech system, using modern integrated circuits, could be contained within the space currently consumed by a minicomputer mainframe. It should also be pointed out that the availability of LSI vocal tract models will be very useful for voice response systems as well, where parameterized representations of human speech are played back, or interpreted, by the model. Such implementation in specialized dedicated processors can only be justified, of course, when the constituent algorithms are stable and based on fundamental considerations which avoid ad hoc solutions. In the author's opinion, serious consideration should be given to practical implementations now, and complete working models can be expected in the next few years.

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Senator Randolph. We will recess for just a couple of minutes while the equipment is being removed.

[A short recess was taken.]

Senator Randolph. Our next witness is Deborah Kaplan, accompanied by Mr. Daniel Clearfield. If you will come to the witness table?

STATEMENT OF DEBORAH KAPLAN, DIRECTOR, DISABILITY RIGHTS CENTER, INC., ACCOMPANIED BY DANIEL CLEARFIELD

Ms. Kaplan. Thank you.

Senator Randolph. Deborah, we are gratified that you join us for these hearings. Will you please give us your name, your title, and the organization that you represent. Perhaps you would care to say something about it because that is the background from which you speak. You might also care to tell us about your associate. You do as you want. Not equal rights, we want additional rights for women. Just take off, and let him participate.

Ms. Kaplan. Fine. Thank you very much.

Senator Randolph. Speak up, pull the microphone toward you. Take your time.

Ms. Kaplan. Disability Rights Center is very grateful to be able to be here to testify on issues relating to disabled people and their use of medical equipment and devices.

Disability Rights Center is a nonprofit public interest organization. We are new in Washington, D.C.; we have been in existence 4 or 5 months. Our goals are to insure that legislation creating civil rights and other protective rights for disabled persons are fully enforced, and also to insure that disabled people can become as independent as possible; which is what you were talking about earlier, Senator.

One of our concerns in the area of medical equipment and devices that are used by the disabled is the consumer's relative power in the marketplace, which is very low in comparison with many of the manufacturers and industries that produce the medical equipment and devices upon which the consumer is totally dependent in many cases.

Because the number of complaints that our and other consumer organizations of disabled people have received regarding medical equipment and devices that disabled people use, we decided to conduct research to examine the industry and the types of complaints that we have been receiving from consumers.

With me is Daniel Clearfield, who wrote the report on medical devices and equipment for the disabled. He is a third-year student at Temple University.

Senator Randolph. What university?

Ms. Kaplan. Temple, in Philadelphia. He is a member of that law school's Law Review, and is putting together a symposium of articles dealing with legal rights and issues concerning the disabled.

Senator Randolph. We are gratified to have you with us, Mr. Clearfield. I know that I often ramble, but I doubt that very many people know that Temple University came into being because of one speech that was given; did you know that?

Mr. Clearfield. I must confess I was not aware of that, Senator.

Senator Randolph. It was called "Acres of Diamonds," and that was the speech that a certain man gave, probably hundreds and hundreds of times. He gave the money from that speech to Temple University. I want to know how many in the audience know who gave the speech "Acres of Diamonds." Let me see if you know?

No one here?

Mr. CLEARFIELD. It was Russell Conwell.

Senator RANDOLPH. That is exactly right.

FROM THE FLOOR. Russell who?

Mr. CLEARFIELD. Russell Conwell.

Senator RANDOLPH. "Acres of Diamonds." I will not put it in the record today, but I recommend that all of you read it because he says you do not have to go way out there to have the opportunity to do something, it is in your back yard.

Mr. CLEARFIELD. That is true, Senator. Temple was really built around that philosophy.

Senator RANDOLPH. Thank you. I am sorry to have worked this in, but often I think of the modest beginning of so many institutions and programs. With continued patience they are getting the job done. I am sure, Deborah, you have to have patience.

Ms. KAPLAN. Today I would like to summarize the findings and conclusions, and recommendations of our report; and to report to you the followup measures we have taken in contacting Federal regulatory agencies and their involvement in some of the issues. I want also to talk about new developments in the area of research and development for products used by the disabled.

The report that we issued focused on three products used by the disabled: Wheelchairs, home respirators, and prosthetic breasts. We used consumer surveys and did extensive interviews in the field with professionals and consumers.

In general the industry that manufactures medical equipment and devices used by the disabled has experienced a healthy profit, and does not seem to have been very much subdued by the recession we have been experiencing in the last few years. One of the reasons the industry is doing so well is that the market is very specialized and static. By that we mean that the people who have to rely on these products, who are the purchasers of these products, are not likely to change. Most likely they are going to purchase devices such as wheelchairs regardless of their budget and regardless of the product, or whatever complaints they may have with it.

We have discovered that the industry which manufactures wheelchairs, for example, is fairly unresponsive to consumer need, when we consider the numbers and types of complaints that have been lodged against the industry. In essence, consumers must take whatever the market delivers; they are fairly powerless in this marketing situation. They cannot decide to boycott a wheelchair if they do not like the quality or decide it is too expensive; they simply have to pay for a product they are not happy with.

In looking at the amount of gross sales and money spent on research and development by Everest and Jennings, which is the major manufacturer of wheelchairs in this country, we found only 0.6 percent, six-tenths of 1 percent of gross sales spent on research and development. In contrast Johnson and Johnson's expenditures of gross sales in 1975 on research and development, was 4.5 percent. One complaint of wheelchair users who have had experience with wheelchairs over many years is that the industry should be spending more money on research and development.

In a survey that we conducted of wheelchair users of the Capitol Chapter of the National Paraplegia Foundation, we found that 34 percent of those responding to our questionnaire were dissatisfied with the wheelchairs they had purchased. Complaints came in to us about faulty brakes; shoddy and sometimes flammable upholstery; unreliable wheels and tires. Lack of sturdiness and durability were the largest problems.

We also had complaints that wheelchairs could not get through narrow doorways. Wheelchairs did not perform well in bad weather, whether it be rain, snow, or ice, which forced people to stay indoors.

Wheelchair repair service should be fast and efficient, and service should be available in widespread areas of the country; however, very often consumers complained of careless handling of orders for replacement parts; delays in receiving orders of sometimes months; and poor warranty repair work. We also had some complaints on the cost of wheelchairs. The average cost of a push or manual wheelchair is $511; the average cost of an electric wheelchair is $1,200.

While many and most users are reimbursed for their costs, or have the wheelchair paid for by some sort of third-party reimbursement system—such as the Veterans' Administration, private insurance, or medicaid—37 percent, according to our survey, paid for the wheelchairs themselves. We find these are the hardest hit of the consumers, who have to contribute to the cost of the wheelchairs totally or almost totally themselves.

In the area of safety we found that electric wheelchairs pose the most hazards. We have heard a report of battery acid being spilled on the wheelchair user when a wheelchair falls over because of lack of stability. We have heard reports of fires to the upholstery or the motors of wheelchairs. And we have had reports of numerous new wheelchairs taking off by themselves with no control of the user, often lurching into the middle of a street or going over the curb, and placing the user in many hazardous situations.

Despite many complaints directly to the manufacturers about these hazardous conditions, no efforts have been made to recall these dangerous wheelchairs.

The other product that we looked at demonstrated a lack of expertise and lack of care in the delivery system where wheelchairs are bought from the retailers. We found many untrained sales personnel without basic medical knowledge; not knowing what type of equipment is best suited for the consumer who comes to the retail outlet. We found that the profit motive is predominant, and very often products are prescribed or sold to the individual not necessarily because they are best suited to the consumer, but more because they are at a higher price and bring higher profit to the retailer.

In the area of respirators we found conditions that involved lack of safety and improper training of consumers. When a patient with a lung condition or disease has reached a point in treatment of medical stability, often the doctor will prescribe home respirators in order to enable the patient to come home earlier and still receive adequate care. However, consumers very often are not told how to take care of the respirators, and how to assemble them. Because they did not know how to clean them and take care of them, we had many reports of consumers coming back into the hospital with worse cases of lung diseases because of poor use of home respirator equipment. This, to us, demonstrates a deficiency in the delivery system.

In the area of prosthetic breasts purchased by women who had recently undergone mastectomies, we conducted a survey on consumer satisfaction. While there was a high of satisfaction with the product delivery system, those complaints that we did receive indicated that at times sales personnel could be very insensitive to the needs of women who come in to buy prosthetic breasts. The emotional state they are in is very fragile because they have just undergone massive surgery; sales personnel can be very callous and uncaring in that consumer transaction.

The report that we issued included several recommendations.

We recommended that medical personnel and medical equipment distributors receive training in the proper and safe use of all products which they prescribe or sell; that they receive appropriate medical training that is pertinent to the selection of the correct product for each individual consumer; that they receive some sort of training that will sensitize them to the special needs of the disabled consumer with whom they deal every day.

We also recommended inclusion of the disabled consumer in the selection and evaluation of medical devices subsidized by third-party insurers.

We also advocate consumer involvement in setting priorities and policies of the medical devices industry. We recommend rigorous Federal enforcement of medical devices product safety legislation, and antitrust legislation with respect to the medical devices industry. And lastly, and probably most importantly, we recommend increased and stronger consumer organization to demand product safety, quality, and efficiency at reasonable prices.

Senator Randolph. Deborah, would you give us the opportunity for just a 3-second recess?

[A short recess was taken.]

Senator Randolph. Deborah, if you will continue please?

Ms. Kaplan. In our followup, we have contacted various Federal agencies to alert them to the problems we have uncovered in our study. First of all, to deal with the antitrust aspect of the issue, the Department of Justice's Antitrust Division has been engaged in an investigation of Everest & Jennings for over 2 years.

The Federal Trade Commission's Antitrust Division has also indicated interest in the anticompetitive aspects of the issue. However, they are refrained from engaging in an investigation of the same company that the Department of Justice is investigating. We therefore feel that it is incumbent upon the Department of Justice to make a decision whether it is going to be pursuing a formal complaint against Everest & Jennings or not, so that the issue can be resolved; and if the Department of Justice is not going to be taking further action, then the Federal Trade Commission should, because the wheelchair consumers are the ones who are being hurt by unfair and anticompetitive practices.

We have also contacted the Federal Trade Commission's Consumer Protection Division and have alerted them to two specific problems that we have uncovered in consumer complaints. No. 1, is that consumers have complained to us—orally and in letters—that when they want to order replacement parts from Everett & Jennings, they are available only in sets. One consumer told us of wanting to order a part that would have ordinarily cost him $2 or $3, and being told by the company he would have to spend over $20 in order to purchase that part because it was only available in a set of other parts, which that consumer did not need.

Also, we are concerned with advertising in the various magazines and publications that reach disabled consumers, that describes the products as "durable," or "for rugged use," when that is the specific complaint we hear most, that they are not durable and not designed for rugged use. In fact, the basic design for wheelchairs has been the same since the 1940's and has not been changed.

Our proposed solution to the Consumer Protection Division of the FTC is to order full disclosure in comprehensive language so that the consumer will understand the actual performance standards for wheelchairs. Let them know just what "rugged" means, and what kinds of activities the chair will stand up to; and what the chair is not good for.

We have also contacted the Veterans Administration Prosthetics Center, which is one of the largest purchasers of wheelchairs; it orders wheelchairs and gives them directly to disabled veterans. The issue we have contacted them about is quality standards being promulgated for the chairs that have been purchased. We feel that they have a certain amount of power and influence in their market relationship with wheelchair manufacturers, and are in a position to demand quality standards for the wheelchairs they have purchased. That Center has indicated a willingness to share information with us in developing standards for electric wheelchairs, which they are in the process of promulgating. They have issued some standards for manual wheelchairs, which we have asked them for copies of, and which we will be reviewing.

Another new issue has come to our attention from Lex Frieden, of the Texas Institute for Rehabilitation Research in the Texas Medical Center. Lex has been involved in the field of rehab engineering for quite some time, and is a paraplegic himself. When I was with him at a conference, he told me about a new problem that he is encountering more and more everyday. New technology is available today; a lot of new products are being developed, such as the one we saw in earlier testimony this morning. But if they are products where the consumer might be involved in some sort of risk or injury to himself, the manufacturers and developers of the product are often afraid that they are going to be held liable in damage actions against them by consumers who were injured from the use of their products.

From our research of court cases involving disabled consumers using products such as the wheelchair, we find that the courts are more willing to impose standards of strict liability, which means no matter how many tests the manufacturer engaged in to prove to himself and the public that the product is indeed safe, that manufacturer can still be subject to damage judgments against it in case of injury.

We feel that consumer protection of this sort is sound, and has been wisely developed by the courts. We are not asking for any kind of lessening of the legal standards. We find that the consumers are in a position where they have conflict of interests. We, of course, want to keep unreliable and unsafe products, or shoddy products off the market, and want, of course, to recover damages in case of injuries. On the other hand, we want to see new technology introduced; we want to be able to receive the benefits of new technology that will make the disabled more independent and more mobile.

We, therefore, have a solution that is certainly not in any kind of advanced stage, that we would like to propose. This would be the establishment of a fund to be used to be made available to manufacturers, a no-fault insurance type fund, much like no-fault insurance has been developed in some of the States for automobile accidents.

Manufacturers eligible to partake of this insurance fund would not be held individually liable, but the reimbursement to the consumer for injury would come from the fund. To be eligible a manufacturer would have to comply with very strict standards for the manufacture of these products, such as safety tests, performance standards, quality control, and perhaps even a consumer board of approval, which would have to review various products that are introduced.

We feel this type of a model would have a twofold advantage. It would solve the immediate problem of not enough technology getting on the market, and it would also bring about the quality control and standards that our research has indicated is very necessary in this field, so that consumers' needs are addressed.

It has also been proposed to us that a tax incentive be allowed for manufacturers, to use funds for research and development, and for the introduction of new technology into the market.

To summarize, the goals that the Center has from our involvement in this field are to increase the mobility and independence of disabled consumers who are dependent upon medical products and equipment that are manufactured by big business. We would like to see more consumer input into product design, and in decisions that are made about what products are put on the market.

We feel it is very important for consumers to begin to exert more control in their market relationship with the industry and with the manufacturers who produce the product upon which the disabled are dependent.

We feel that increased independence and mobility are not goals that are too high for disabled consumers; most of us take these everyday considerations for granted, the fact that we can get around and be as independent as we are. We hope that eventually these goals can become a right that disabled people expect on a day-to-day basis.

Senator RANDOLPH. Thank you very much, Deborah.

I read what you have earlier said, and that is that the organization you speak for today was established to insure that legislation creating rights for the disabled is enforced, and that the disabled consumer who relies on various medical equipment and devices in order to live more independently, is represented fairly in the marketplace.

This is a statement with which Senator Stafford and I have agreed many, many times.

I am wondering, Bob, if on the record, as presented by Deborah, we have perhaps a base from which not just to have another investigative hearing, but also to call in the company that you mentioned, Deborah—respresentatives of that company—to discuss these issues.

Would you feel that would be a clarification and presentation on both sides, Deborah?

Ms. KAPLAN. Certainly.

Senator RANDOLPH. I believe that should be done.

How many wheelchairs are there, if you have that knowledge, in use in this country, Mr. Clearfield? In all segments. The airlines have hundreds of them, as do other transport programs; the hospitals, of course, have them. So, that is built in beyond the individual person, or persons using wheelchairs. Would you have an estimate?

Mr. CLEARFIELD. That is a well-taken point, Senator. There is a difference between the conventional wheelchairs used on an everyday basis by airlines, and those that are used by the severely disabled. Estimates are difficult because there are really no real figures as to how many handicapped individuals there are in this country. One estimate has been 400,000 wheelchairs in the United States. I might add that by 1980 that should double, basically because of the advanced medical technology; and the number of casualties that we experienced in the Vietnam war.

Senator RANDOLPH. 400,000?

Mr. CLEARFIELD. Wheelchair users in the United States.

Senator RANDOLPH. And it continues to increase, I suppose.

Mr. CLEARFIELD. As I said, Senator, the estimates are that by 1980 the number might increase by fourfold because of the advances in medical technology.

Senator RANDOLPH. You mean that people are living longer?

Mr. CLEARFIELD. Yes.

Advances in medical technology have enabled physicians and the medical profession to save individuals that would not have lived before. Also because we have injected into society a number of individuals, survivors from the Vietnam war, paraplegics or with other handicaps.

Ms. KAPLAN. I might also add, because of the growing move of disabled people to become more independent and active, and mobile in today's society. More and more users of wheelchairs are going out in the streets, using their cars to get around many more places. Also, if more buildings become accessible to the disabled, there are going to be more and more places for them to go, thereby increasing the demand for more equipment that fits their needs.

Senator STAFFORD. Mr. Clearfield, did I understand you correctly, you suggest that by 1980 there will be 1,600,000 wheelchairs in use?

Mr. CLEARFIELD. Senator, that is an estimate, obviously, the number of 400,000 is also an estimate. Most experts predict that the number of handicapped individuals—more precisely those who will be using wheelchairs—will increase dramatically. They will no longer be a small minority, but will be a real force in American society.

Senator STAFFORD. Do you have any projections—and I realize this is just an estimate, also—as to the number of electric wheelchairs that are likely to be driven by 1980, as a percentage of the total?

Mr. CLEARFIELD. That is a difficult question, Senator. I really would not be able to answer that with an exact figure. I would suggest that, because technology has been developing, the number of electric wheelchairs will increase dramatically; and the number of individuals that will be more severely handicapped will also increase dramatically because medical technology has enabled individuals to live, and to live, hopefully, a productive life.

Ms. KAPLAN. If I might add, one of the reasons disabled individuals use the manual and push wheelchairs is because transportation facilities like buses and trains, and subways, have not been accessible to them. So, unless a person has a van, outfitted to accommodate an electric wheelchair, which is of course much heavier than a manual or push chair, the person usually uses a manual or push chair, which can be folded into a car, to get around. But, as transportation becomes more accessible, we probably should expect that more people will be using electric wheelchairs, so that they can use their strength for other things, not just getting around.

Senator STAFFORD. I gather from your statement that the power wheelchairs create a lot more problems, and they are probably a greater danger to the user than the other chairs.

Ms. KAPLAN. From the complaints we have, the dangers are greater.

Senator STAFFORD. Mr. Clearfield, do you have any idea whatsoever that if this subcommittee should call in the leadership of Everest & Jennings for a discussion of their problems, whether or not we would in any way prejudice the Justice Department proceedings? I am asking you as a third-year law school student.

Mr. CLEARFIELD. I understand that. I believe if their testimony were restricted to rebutting, or explaining some of the allegations, the criticisms that we had made in the report, I think that would be very valuable. I also believe that they would be at liberty to provide the subcommittee with information as they saw fit. From that point on—if I might hazard a guess—you would be able to question them on that information or discuss with them the possibility of injecting some competition in the wheelchair industry.

Senator STAFFORD. Let me ask one final question of you both. Do you have any suggestions on how the industry might be stimulated to increase their research and development activity in fields that you have been discussing?

Ms. KAPLAN. Mostly to reiterate what we have already said. No. 1, we feel that more vigorous enforcement of antitrust statutes and regulations is a prerequisite for stimulating competition in the market, and thereby allowing the introduction of new equipment into the market. Again, I think something like the no-fault insurance which I suggested would take away some of the disincentives which are now being presented to the manufacturers who are willing to use new technology. That might stimulate more research and development taking place.

Also—and I did not develop this fully, but it should be considered—a tax incentive to be introduced in tax legislation for manufacturers who use moneys for research and development, and to introduce new technology into the market.

Senator STAFFORD. Do you have anything to add to that, Daniel?

Mr. CLEARFIELD. I would just add that vigorous antitrust enforcement would create a situation where wheelchair industries and all technologically competitive industry would have to compete by improving their products constantly. You see that in more sophisticated devices, like diagnostic products, where competition really exists. When these particular manufacturers develop a better mousetrap, they increase their sales until another company is able to make a more sophisticated product.

Senator STAFFORD. Well, on behalf of Chairman Randolph and myself I want to express our appreciation to both of you for being here this morning and helping this subcommittee in its oversight hearings. Again, our thanks. You may now leave the witness table.

Ms. KAPLAN. Thank you.

[The material referred to follows:]

disability rights center inc

Senator Jennings Randolph
5121 Senate Office Building
Washington, D.C. 20510

May 16, 1977

Dear Senator Randolph:

Enclosed is information from Deborah Kaplan's resume as requested for the record:

Education: JD from Boalt Hall, University of California, Berkeley, June 1976. Member of State Bar of California;

B.A., Religious Studies, Universtiy of California, Santa Cruz, June 1971.

Past Experience:

4/74 - 6/76: Board of Directors, Center for Independent Living, Berkeley, Ca. Chairperson;

5/74 - 6/76: Consultant, Human Sexuality Program, San Francisco Medical Center, University of California;

6/75 - 6/76: Founder, Disabled People's Legal Resource Center, Berkeley, Ca;

9/76 - Present: Founder, Director - Disability Rights Center, Washington, D.C.

If you have any questions just call.

Yours truly,
Deborah Kaplan
Deborah Kaplan
Director

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MEDICAL DEVICES AND EQUIPMENT FOR THE DISABLED: AN EXAMINATION

by Daniel Clearfield

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MEDICAL DEVICES AND EQUIPMENT FOR THE DISABLED: AN EXAMINATION

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I. Introduction

Each year a growing percentage of Americans purchase a medical device as a substitute or supplement for some impeded bodily function resulting from a permanent or temporary disability. Unlike other purchases, the mobility and autonomy of these disabled consumers rely on the dependable functioning of these devices. Yet in many cases these consumers are offered products which do not satisfy reasonable expectations of safety, efficiency, and affordable cost.

This report examines products used by disabled consumers whose physical condition is static (not likely to change), or is improving, in which case the product is used to enhance the improvement. For example, many persons who use wheelchairs have static disabilities, and persons using home respiratory devices have conditions which are improving. Both of these groups of consumers are dependent upon a medical device in order to increase their integration and participation in society.

The wheelchair user, the mastectomy patient, and those affected by pulmonary (lung) disease are among the many disabled who have not been considered, or do not consider themselves, as regular consumers who can demand standard quality control. Both disabled consumers and society are affected by the psychological discomfort of serious disability and have deferred complaint, exempting the medical equipment industry from further efforts to meet the special needs of these consumers. While there is evidence that these attitudes are changing, many members of the medical equipment industry continue to deny their customers minimal expectations of reliability. Quick warranty repair, reasonably-priced merchandise, or products customed to the needs of the user are legitimate consumer demands. By disguising themselves as extensions of the medical profession, medical equipment dealers have eluded these requirements of responsive marketing. It is more than reasonable to require the same accountability in the medical equipment industry as we do in the manufacture of home appliances. Yet the very nature of these products demands an even greater degree of responsibility on the part of those who manufacture and deliver them. Medical devices for the disabled provide life support and self-maintenance and are not objects of capricious consumption from advertised specials. They are 'necessities of life.'

We have examined the manufacture, design, sale and use of selected medical devices and have encountered numerous instances in which these demands of responsibility have not been met. By focusing on a few products--wheelchairs, breast prostheses (artificial breasts), and respiratory therapy equipment--and by surveying their users, we discovered what problems occur when quality standards are not maintained. In some cases, problems occur because distributors or manufacturers have not recognized their responsibility to provide minimal services. In other instances, the industry performs as well as other industries but because of the special nature of these products, the mere average level of responsiveness is not sufficient.

This is a preliminary investigation which is certainly not definitive. Our purpose has been to provide some direction for future investigations. A number of areas have received only cursory examination and warrant more consideration. The role of the professional in the delivery system is certainly one such area and an examination of state vocational rehabilitation programs is another.

We hope a continuing effort will be directed towards assuring the responsiveness of these products and services to the needs of their users and towards encouraging disabled consumers to realize they are entitled to such accountability. Towards this end, we must continue to eliminate the legal and social obstacles which have left millions of disabled Americans effectively neglected by a marketing economy which has the capacity and creativity to be responsive.

II. General Industry Information

The medical device and equipment field is a growing industry consisting of approximately eleven hundred companies producing up to twelve thousand products. Generalized statements about an industry whose most striking characteristic is diversity would be unwise. Certain observations, however, can be substantiated. While this report focuses on products used by disabled consumers to achieve maximum independence, it is useful to understand the characteristics of the industry as a whole. In general, these characteristics are shared with the sub-group of the industry which produces these devices.

Standard and Poor's Industry Survey[1] listed domestic expenditures for medical and health services at $112 billion in 1974, an increase of 14% from 1973, and predicted a further 12% rise for 1975. They also estimated that approximately $4 billion of the 1974 expenditure was for medical and dental equipment and supplies, an increase of 11% over the previous year, and predicts a similar 11% rise for 1975.[2] These figures compare conservatively with the 14% increase recorded by the Pharmaceutical Manufacturer's Association.[3] Thse figures can also be compared to data compiled by Predicasts Inc. in a special 1972 study of the medical and dental equipment industry.[4] They assessed expenditures for medical and dental equipment and supplies at $1.2 billion in 1963. By 1972, their estimates had grown to $2.8 billion, or 3.3% of overall health care costs. In comparison, the $4 billion which Standard and Poor listed for 1974 expenditures is approximately 3.5% of our total national health care bill. These statistics reveal a greater percentage of the health care dollar being spent for medical equipment and devices.

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[1] Standard and Poor's Industry Survey, Health Care, p. H11 (1975).

[2] Standard and Poor's Industry Survey, Medical and Dental Supplies and Equipment, p. H19 (1975).

[3] Pharmaceutical Manufacturer's Association 1974-75 Annual Survey Report, p. iii.

[4] Predicasts Inc., Special Study, Medical and Dental Equipment Industry, p. 1 (1972).

Various products account for this market, ranging from sophisticated diagnostic scanners--by-products of the technology which facilitated America's space conquests--to more mundane items such as tongue depressors and bandages. Millions of disposable plastic and paper tubes, masks, sheets, gowns, syringes, and utensils are produced, used, and thrown away each day. This seeming disregard for recycling efforts is to minimize the chances for infection. However, the popularity of these items has resulted in an assured market for many companies.

American Hospital Supply Corporation and Johnson & Johnson, Inc. have developed themselves into a dominant industry position in response to this boom. Total sales for 1975 of $2.25 billion and net profits of almost $184 million make Johnson & Johnson the largest overall.[5] About 40% of these sales derive from hygenic products (baby powder) and industrial manufacturing. When medical devices and equipment alone are considered, the largest company is probably American Hospital Supply which claims to distribute over 57,000 products, 15,000 of which it manufactures; American Hospital Supply is currently under investigation by the Federal Trade Commission's Division of Competition, as is the entire health care industry.[6]

Most of the firms in the industry, however, are small. Two-thirds of them have annual sales of less than $10 million, and 38% gross $1 million or less in sales.[7] A 1973 study of the medical equipment and supply industry, "Economic Organization in the Medical Equipment and Supply Industry," observed that

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[5] Johnson & Johnson Inc., 1975 10K Report.

[6] Wall Street Journal, June 18, 1976

> the striking feature of the medical equipment sector is its diversity. Medical equipment is produced not only by the subsidiary operations of some conglomerates and by large firms...but by very small firms that tend to specialize in one or two devices.[8]

Competition on this scale is so keen that one industry representative claimed they had all they could do to keep their companies in business.[9] Such an assertion is not surprising, as the 1973 study shows. The four largest companies in the 3841 and 3842 categories[10], which encompass most of the products with which we are concerned, account for more than 40% of the total value of shipments in the industry. The study concluded that "the medical equipment industry does not approximate a competitive structure."[11]

The study's survey of the industry also revealed that the amount of vertical integration--an industry's ratio of value added to sales--is not significantly greater than average, with the larger firms exhibiting concentration and the smaller manufacturers more dependent on outside suppliers. If some aspects of the medical equipment industry are not unlike other product areas, a number of traits nevertheless remain unique. The most important characteristic of the industry is its specialized, inflexible consumer market. The demand for these products is particular, imperative, and inflexible.

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[7] Hearings on the Medical Device Amendments of 1973, 93rd Congress, 1st Session (1973), testimony of K. Marshall at 473.

[8] R. Peterson and C. MacPhee, "Economic Organization in the Medical Equipment and Supply Industry" (1973), at 11. (Hereinafter 1973 study).

[9] Interview with C. Briggs Phillips, Vice President, Science and Technological Affairs, Health Industries Manufacturers Association.

[10] These are standard industrial code numbers (SIC) which have been assigned to all products for purposes of classification.

A survey in the 1973 study revealed that 66% of the companies did not show prices in their direct mail advertisements,[12] even though most purchasing institutions do not buy medical equipment on a bid basis. Moreover, the study found that more resources were poured into product promotion and style change than to price competition or significant technological improvement. The survey also discovered that most firms made style changes every five years and 20% announced innovations every two years.[13] They concluded that most of these changes could be attributed to superficial product variations. Furthermore, they discovered funds expended for research and development decreasing from 9.5% of gross sales in 1957 to 2.6% in 1969, or an average of 4% for that period. This can be compared with the research and development expenditures in relation to sales for the Pharmaceutical Manufacturer's Association which was 12% in 1972[14] and has increased steadily over the years. Granted, this is one area in which the type of product governs cost incurred. Expenditures, however, should be responsive to needs. In some product areas, such as diagnostic equipment, design innovation occurs frequently and acts as the primary avenue of competition. In other product lines the need for research and development is not present. For example, the design of the stethoscope has not changed since it was invented, though most users seem content.

In the great majority of cases an active research and development

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[11] 1973 study, supra., note 2, at 19.

[12] Id. at 66.

[13] Id. at 156.

[14] Pharmaceutical Manufacturer's Association Report, supra note 3 at p. 14.

program can provide safer, more effective products, frequently at lower prices. The obstacle for the manufacturers lies in the interim decrease in net profits. The absence of this expenditure by the industry appears to be caused by the recognition that the demand for their products is a certainty and needs only superficial marketing manipulation. The 1973 study revealed one persistent effect of this generally non-competitive nature of the medical equipment industry--profits have consistently been above average. The ratio of median-net-profit to tangible-net-worth for medical equipment and supply companies increased from 9% to 10% in the period from 1963 to 1970.[15] The study observed that the existence of excessive profits over time suggests either monopolistic restrictions or barriers to entry within the industry.

These non-competitive tendencies have not occupied the attention of the academic community alone. The Justice Department has recently announced the initiation of a broad investigation into the health services area.[16] In recent congressional hearings, James V. Delong, Assistant Director of Special Projects, Bureau of Consumer Protection, Federal Trade Commission, stated:

> Products that ease human suffering are not exempt from the laws of economics, so the issue becomes whether there are barriers to the functioning of the free market that raise the prices of these goods. Our present view is that there are such barriers and they do raise prices.[17]

A. Case Study: The Wheelchair Industry[18]

Perhaps to a greater degree than other industries, there is really no

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[15] 1973 study, _supra_ note 11, at 150.

[16] _Wall Street Journal_, June 18, 1976.

[17] Testimony of James V. Delong, Bureau of Consumer Protection, FTC, Hearings on Needs and Costs of Medical Devices For the Elderly, Subcommittee on Health and Long Term Care, Select Committee on Aging, 94th Congress, 2nd Session, June 23, 1976.

"average" company in the medical equipment industry as there is no "average" product. But to the extent that a description of a particular product would be reflective of the medical equipment industry, an examination of the wheelchair might prove helpful. The wheelchair is a maintenance-support product for 400,000 disabled Americans. Many of its failings are similar to those suggested by the general study of the medical device industry as discussed.

1) Manufacturers In their 1975 annual report, Gerald M. Jennings, chairman of the board of Everest & Jennings International (E & J), proudly reported:

> Our company achieved gains in several important areas in 1975, a year of generally uneasy economic conditions. In the United States, where domestic medical equipment product lines constitute the major part of our business, we believe we were successful in maintaining our share of the steadily growing market. Sales increased 17 ½% in 1975 and profit margins were improved.[19]

As the largest producer of wheelchairs in the world (their contention, but there is no reason to doubt it), E & J cites its growth with reflective pride. From a two-man operation working out of a garage in the 1930's, the company has grown to international distribution with gross revenues of $51 million and total assets of $37 million in 1975.[20] E & J currently holds a 50% share of the wheelchair market and a 90% share of the more lucrative market of custom-made chairs for the severely disabled. Along with their medical and rehabilitative equipment division which accounts for 85% of E & J's business, they own a number of metal-

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[18] Information in this section was compiled from relevant 10K and Annual Reports, interviews, and a memorandum prepared by the law firm of Seymour & Patton, Washington, D.C., for Ralf Hotchkiss, Center for Concerned Engineers, March 15, 1976. (hereinafter referred to as Memorandum)

[19] Everest & Jennings International, 1975 Annual Report at 2.

[20] E & J International Inc., 1975 Annual Report. (All references will hereinafter be to E & J International)

working and finishing plants as well as a recently acquired electronic data-gathering-equipment manufacturing facility. E & J's sales of medically-related equipment have increased from a total of $12 million in 1968 to $44 million in 1975. Net income in this division similarly increased from $1.6 million in 1968 to $3.9 million in 1975.

E & J's leading competitor, Invacare, a subsidiary of Technicare, has also profited. Their gross revenues have grown from $2.9 million in 1971 when they were purchased by Technicare to $13.7 million in 1975, an average yearly growth rate of 20%. Pretax profits correspondingly increased from $665,000 in 1973 to $1.05 million in 1975.[21] They have since procured a 30% share of the wheelchair market. The precise reason for their success can only be speculated. They refused our requests for information, referring us instead to their attorney. A possible explanation for Invacare's recent success may stem from E & J's market dominance and reputation as the "Rolls Royce" of wheelchairs. When buyer preference is based on this sort of "tradition," a competitor can drain a large percentage of the market, at least for a short while, by offering similar advantages at competitive prices. This is what Invacare seems to have done. However, the interviews we conducted reveal that those who tried both brands thought E & J produced a better wheelchair. This could be an indication that Invacare's success will soon level out.

The third largest company in the domestic market--E & J clearly dominates foreign sales--is Gendron Inc., a division of Howmet Inc., the principal supplier of Sears & Roebuck. Their sales are equally divided between the sale of standard and customized wheelchairs.

Generally the return on investment in the industry as a whole is a modest 6%, but this is deceiving. The vertical concentration of the top two or three firms allows them to bury profit within their subsidiaries, as well as to expend high dividends to corporate stockholders.

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[21] Memorandum, supra note 18, at 56.

2) Consumers Wheelchairs are purchased in equal part by individuals and by institutions, but an intermediary such as the Veterans Administration or a state rehabilitation agency may actually purchase the chair for an individual. VA hospitals around the country purchased about 20,000 chairs, mostly of the manual type, in 1975 at a cost of $3 million. The average cost per chair was $196. These chairs are purchased through General Service Administration contracts with a volume discount usually given. E & J fills a large portion of the VA's purchasing orders, claiming VA patients prefer E & J products.

Most other institutions as well as indiviuals purchase their chairs through a medical supply distributor. While an initial purchase will usually involve a trained professional, such as a physician or physical therapist, subsequent acquisitions are made by the user alone. According to the degree to which medical input is absent from the transaction, the purchaser of a wheelchair is liable to all the risk and fraud possible in any consumer purchase.

Vigorous advertising campaigns by direct mail and through relevant publications are engaged in by most medical equipment manufacturers. E & J, for example, spent $480,000 on advertising in 1975.[22] As mentioned above, the price of these products is hardly ever listed. These advertisements, therefore, are no aid to competitive purchasing. Suggested retail price lists are popular and almost universally accepted by the distributors. Unlike buying stereo equipment or a new car in which the advertised price may be lower than the suggested retail price (i.e., the "discount"), the wheelchair purchaser usually pays the price decided upon by the manufacturers. Upon polling a number of Washington, D.C. area distributors, we discovered almost without exception that the price quoted to us by the dealer was the same as that "suggested" by the manufacturer.

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[22] Id. at 70.

The same basic model designs have been the industry's staple for a great many years. In fact, relatively little research and development expense is incurred in the industry. While the major marketing innovation of the power-driven chair occured fairly recently and is by industry standards far from perfected, E & J International nevertheless spends only about $300,000 per year for all of their research and development--a mere .6% of their gross sales.[23] In contrast, Johnson & Johnson spent almost $100 million on research and development in 1975, or 4.5 % of their gross sales of $2.5 billion--a percentage only progressive in comparison with E & J's record.

In summary, our survey reveals an industry riding high on the increasing costs of health care. Enjoying the dual advantages of a captive consumer group and a third-party reimbursement system which eliminates most cost consciousness, the medical equipment industry is presently in a very lucrative position. The most important development in this economic inequity is clearly the newly-enacted federal regulatory scheme, which will be discussed below. The effect of responsive regulation on this industry is impossible to determine at this time; however, it will provide a tool for the redress of consumer grievances.

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[23] *Id.* at 72.

III. The Need for Federal Regulation: Safety, Cost and Effectiveness

A. Safety Three years of hearings, mark-ups, reports, and debate produced the Medical Device Amendments of 1976 to the Food, Drug, and Cosmetic Act.[24] The Senate hearings in 1973[25] revealed a litany of horrors: malfunctioning pacemakers, IUDs causing permanent damage, tracheal tubing punched out without air passages, etc.[26] To combat these threats to life, jurisdiction over these medical devices was formally granted to the Food and Drug Administration by Congress. Included was a complex regulatory scheme so involved it prompted one FDA official to refer to the Act as the "Attorney's Full Employment Act of 1976."

The Act requires all products which may threaten public safety to be subject to performance standards instituted by the FDA's Medical Device Division. In addition to other regulatory powers, the FDA is also granted repair, refund, or recall powers when in its judgment a device presents an "unreasonable risk of substantial harm to the public health."[27]

The Amendments were preceded by a number of serious, widely publicized incidents over the years, most of which are documented in the legislative history of the Amendments. We were told by an FDA official of a height-adjusting x-ray table which malfunctioned while a patient was strapped to it, crushing her to death on the ceiling. He also related a number of incidents in which silicone-filled internal breast prostheses leaked and killed the women involved. We were told electric wheelchair fires were common, as are injuries when electric wheelchairs overturn, spilling battery acid on the user.[28] Our investigation of respiratory equipment revealed similar safety problems. Certain therapy equipment was manufactured without the necessary accuracy for ensuring delivery of a particular amount of gas as indicated on the dial setting. Without conducting a complicated control experiemnt, it was impossible to determine how much oxygen a patient was getting when the machine was set for "40%". The precise amount of oxygen a patient receives, particularly one with a serious pulmonary disease, is crucial. The consequence in some instances could be fatal.

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[24] Public Law 94-295, 21 U.S.C.A. §301 et. seq. (supp. 1976).

[25] Hearings on Medical Device Amendments of 1973, 93rd Congress, 1st Session, (1973).

[26] A Blue Ribbon panel reported in 1970 that a search of the scientific literature revealed over 10,000 recorded injuries of which 731 were fatal. 512 deaths and 300 injuries to heart pacemakers, 10 deaths and 8,000 injuries caused by intrauterine devices. Senate Report No. 94-33, 94th Congress, 1st Session (1975) at 6.

[27] 21 U.S.C.A. §360 h (Supp. 1976).

A survey of tort and product liability suits filed in recent years revealed other various safety and design problems. Manufacturers and intermediaries have been attacked for injuries resulting from defective surgical pins (*Bowles v. Zimmer Mfg. Co.*, 277 F2d 868 (7th Cir. 1960); *Orthopedic Equipment Co. v. Eutsler*, 276 F.2d 455 (4th Cir. 1960); *McCasson v. Zimmer Mfg. Co.*, 12 Ill. App. 3d 429, 299 N.E.2d 38 (1973)), X-ray equipment (*Nelson v. Swedish Hospital*, 241 Minn 551,64 N.W. 2d 38 (1954); *Sinatra v. National X-ray Products Co.*, 26 N.J 546, 141 A.2d 28 (1958)), vaporizers (*Lindroth v. Walgreen*, 407 Ill. 121, 94 N.E. 2d 847 (1950)), rupture pads (*Harmon v. Plapao Labs.*, 218 S.W. 701 (Mo. 1920)), artificial limbs (*Perkins v. Fit-Well Artificial Limb Co.*, 30 Utah 2d 151, 514 P.2d 811 (1973)), and even wheelchairs (*Martin v. Aetna Casualty & Surety Co.*, 338 F.2d 911 (5th Cir 1964) in which the court stated that "a wheelchair case is an *a fortiori* case for holding a manufacturer and assembler liable to a user," since the manufacturer knows it will be used by the "old, the infirm, and the crippled."[29]

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[28] see further discussion on Medical Device Amendments, p. 25.

Court actions, while providing some indication of the safety problems consumers have encountered, are clearly only the tip of the iceberg. Manufacturers are notorious for their desire to settle these cases. As the leading manufacturer of wheelchairs, E & J has rarely if ever allowed an action against them to proceed to trial. Johnson & Johnson, in its 1975 10 K report (similar to a corporation's annual report), cites current involvement in numerous legal actions, but expresses confidence that most will be handled without serious consequences.

Safety hazards involving medical devices have been so common that the Emergency Care Research Institute, a non-profit medical research organization, found the need four years ago to begin publication of a magazine devoted solely to analysis of hazards in medical devices. Published monthly, Health Devices has documented a history of careless manufacturing practices in the medical device industry.[30]

B. Cost Consumer complaints of cost are not unusual in the midst of spiraling inflation. Increased costs for medical equipment and supplies, however, inflict a life-threatening injustice on disabled consumers. These costs have been criticized as artificial and unnecessary. A woman in Oregon wrote that the cost of keeping her supplied with oxygen had increased 100% within a year. She complained she was at the mercy of only one distributor who could supply the oxygen and equipment she needed. We discovered a similar cost increase in Pennsylvania where the Medicare charge for an average-size tank of oxygen rose from $7 to $20 from 1972 to 1976. A woman in Detroit reported a $127 charge to make repairs on her leg brace which consisted of replacing three leather straps. An oxygen therapist confided he could build his own breathing machine for a fraction of the list price. An Easter Seal representative wrote that they were charged $79 to fit braces on the shoes of a four-year-old ward of the state.

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[29] see footnote 25 at 914.

[30] Emergency Care Research Institute, 5200 Butler Pike, Plymouth Meeting, PA.19462

The wheelchair has also generated a great deal of controversy over its cost. In 1974 a Jack Anderson column revealed a dramatic discrepancy between the retail price of manual chairs in the United States and those in the United Kingdom.[31] The difference ran as high as $360 for what was claimed to be the same chair. In 1976 the price of the E & J Premier standard adult model with detachable desk arms, swing-away footrests, and pneumatic tires in the rear was $496. In England, however, the price of an identical chair (with pneumatic tires provided at no extra charge) is $161. Our investigation was unable to confirm whether these lower prices existed throughout Europe.

Defenders of the industry justify high domestic prices by claiming that U.S. products are made with better materials. The E & J wheelchair, for example, is made with "chrome-plated steel as compared to the less expensive chrome-plated cold-rolled steel" used in English models[32]--tne former contends to be stronger. Another lightweight U.S. model compared to its English version is $400 more expensive.[33] The English chair used in these comparisons was manufactured until 1975 by Zimmer Orthopedic Limited, a subsidiary of E & J International. Ralf Hotchkiss, the engineer whose price comparisons were cited in the Jack Anderson column, stated that the differences in the quality of the building materials and brazing techniques used in the U.S. and English models are not significant and do not warrant a sizable price difference.[34]

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[31] Boston Evening Globe, February 20, 1974.

[32] "Do Wheelchairs Cost Too Much?" Accent on Living, Summer 1976.

[33] Id.

[34] Interview with Ralf Hotchkiss, Center for Concerned Engineers, Jy 17, 1976.

The expense of being disabled has grown so oppressive that it has drawn the attention of the House Subcommittee on Health and Long Term Care. The Committee concluded that medical equipment is expensive and in many cases the cost seems unjustified.[35] Congressman Pepper's subcommittee cited such examples as eyeglasses which sell for $26-50 on the open market, purchased by the Defense Department and the State of Michigan for $14; and hearing aids supplied through the VA for about $26, including audiological test, which sell for $200; and a wheelchair purchased by the VA for $185 which sells at an average retail cost of $511.

Those hardest hit by the cost mark-up are those who receive no third-party reimbursement. Medicare, Medicaid, the VA, and Blue Cross/Blue Shield will all subsidize the acquisition of durable medical equipment. Medicare, which assists in purchasing more equipment than any other, spent $14.8 billion in 1975, paying 80% of a predetermined "allowable charge" for most of the products we have discussed. The allowable charge is regionally determined and is based on the average charge of dealers in a particular area. As retail prices increase, Medicare's costs also increase. These increased costs clearly affect every person who contributes to Medicare/Medicaid through taxes. Those who receive assistance in purchasing their equipment are also affected by the increased cost for repairs and incidental services as Medicare will only pay repair costs up to the price of the original item.

When Dr. Sidney Wolfe, Director of Public Citizen's Health Research Group, testified before Congressman Pepper's House Subcommittee on Long Term Care, he quoted from an industry research report for the leading manufacturer of pacemakers which provides some rationale for the price spiral:

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[35] Statement of Congressman Claude Pepper, Hearings on Needs and Costs of Medical Devices for the Elderly, Subcommittee on Health and Long Term Care, Select Committee on Aging, 94th Congress, 2nd Session, June 23rd, 1976.

> Price is not likely to become an important competitive element. The pacemaker is a vital device and a doctor bases his decision on confidence in the product rather than on price. Since Medicare pays for most pacemakers the patient is also not concerned with price. Thus, the demand for pacemakers is somewhat inelastic, providing little, if any, incentive for manufacturers to cut prices.[36]

Focusing on other possible methods of achieving reform, the Justice Department and the Federal Trade Commission continue to investigate price schemes of various medical equipment manufacturers. These investigations are expected to substantiate reform action. Cost variables must be recognized, in addition to the availability of repair services and the convenience and reputation of distributor parts. In the interim much benefit could accrue from an increased awareness by disabled consumers who purchase medical equipment with or without institutional assistance.

Finally, the medical professionals should enter the transaction with the support and advice of their technical evaluation. Professionalism can exert influence upon an otherwise purely economic exchange, mitigating the profit motive and its effect on the susceptible consumer. The personal concern of a doctor or therapist can be extremely effective in securing more advantageous prices for equipment and repairs.

C. Effectiveness While the new federal regulatory act will alleviate many of the serious threats to life these products have presented in the past, it is doubtful whether the Act will effect the more mundane considerations of quality and daily effectiveness which are so important for the consumer of these products.

The disabled are continually presented with the limited choice between using products that only minimally meet their needs or doing without. Except for a small percentage who are capable of constructing and designing their own equipment, the disabled must rely on what the market offers. With greater recognition of the need for products that are not only safe but also more than minimally effective, we can enlarge this market making it both responsive and accountable.

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[36] Research report, Meditronics Corp., Smith, Barney & Co., quoted in Testimony of Dr. Sidney Wolfe, Public Citizen's Health Research Group, Medical Appliances hearings, supra note 7.

1) Case Study: Wheelchairs[37]

> There is not a better chair on the market today in terms of materials and workmanship than the E & J Premier.
> --Mark Patrick, Sales Manager, The Hill Rom Store, Bethesda, Maryland
>
> I have never been in sympathy with the criticism of E & J. It is a wasteful harrassment of a company turning out a first-rate product. After all, if as good a wheelchair could be made at a lower price, some competitor would do it.
> --comment of a wheelchair user from the Center For the Study of Responsive Law Wheelchair User Survey
>
> It's true, E & J makes the best wheelchair on the market, but that chair is crap.
> --federal official who rides a wheelchair

Approximately 400,000 Americans use some type of wheelchair daily. Yet a wheelchair built to manage narrow entrances and exits, to withstand full-time and vigorous use, or to store easily in an automobile is as necessary for disabled citizens as are accessible public facilities or non-discriminatory employment practices. Lack of mobility only increases other problems the disabled must overcome.

The basic design of the wheelchair was developed in the early 1940's and consists of two large push wheels in the back, two caster wheels in the front, a frame made of nickel-plated steel with an "X" frame under the seat that permits folding. Gadgets have been added over the years like swing-away footrests, toggle brakes, removable armrests, reclining backs, and pneumatic tires. Despite these monor improvements, the basic operating deficiencies of the chair remain.

Since the 1950's the power-driven (electric) wheelchair--an important innovation for quadriplegics and others who find it impossible to maneuver a manual chair--has been widely marketed. It is, however, simply a variation on the traditional theme. What is needed is a concentrated effort to make a new kind of small electric vehicle.

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[37] Much of the information in this section is based on Ralf Hotchkiss, "Left To Your Own Devices: The State of the Art of Wheelchair Design," in Mobility For Spinal-Cord Impaired People, National Academy of Sciences Workshop, Feb. 22-24, 1974, and on numerous conversations with Mr. Hotchkiss.

The average hip width of an individual is 13 3/4 inches. The standard wheelchair seat width is eighteen inches. The overall wheelchair is 26 1/4 inches wide and can only be narrowed to around 24 inches by means of an optional crank and removable arms. This breadth makes many rooms in an average building inaccessible. While most main doors are 30 inches wide, many secondary doors are only 22 inches wide, a fact many manufacturers repeatedly ignore. While narrower chairs are available, they are labeled "junior" or "narrow". This misleading label has prevented many wheelchair users from realizing that they can obtain a more functional chair. Distributors rarely carry a large supply of such models, nor are they available with the wide range of "standard" options. The gradual adaptation of wheelchair-accessible architecture in buildings under construction may eventually end this problem. In the meantime, narrowing wheelchairs to fit the rider will make life easier for the small to average wheelchair users.

Another advantage to the narrower chair is easier mobility for the user. One paraplegic who built his own chair narrower confided that one reason he travels with greater ease is that his chair is no larger than needed to fit his body. Unfortunately, such modifications can only be made on a special-order basis through most wheelchair dealers; the general availability of excessively wide wheelchairs considered to be "standard sizes" by the industry and almost exclusively stocked by most distributors force most wheelchair users to accept an over-sized product.

Increasingly sophisticated medical technology has resulted in the survival of many disabled persons who ten years ago would have died from their illness or injury. This medical success will mean that the number of individuals with a mobility or dexterity problem--11 million, or approximately 9% of the population in 1970--will increase to 30 million by 1980, or 20% of the population.[38] Their mobility and self-maintenance is not only physically possible through responsive manufacturing, but fiscally necessary, for the alternative is for persons to be bed-ridden most of the time or hospitalized. Awareness of the creative potential of responsive technology and its liberating use and demand by the disabled can result in products that meet the requirements of durability and effectiveness. We have yet to see industry respond appropriately.

One therapist at George Washington University Hospital explained the problem:

> A wheelchair isn't designed to withstand stress. Unlike a bicycle which distributes stress throughout the frame, a wheelchair is just a mess of 'miscellaneous plumbing' applying force in various directions.[39]

Breakdowns are commonplace, particularly in the "X" brace. Shock absorbers are not standard equipment and neither are pneumatic tires; yet either would lessen the wear a chair takes when actively used. Spokes and wheels are apparently designed for sedentary use. Unlike bicycle wheels, the holes in the wheelchair hub are too big and the metal is not thick enough to prevent bending. As a result, the spokes loosen and break continually.

Many able-bodied persons take for granted a soothing walk in the rain or snow. Wheelchairs, however, don't work well in the rain and don't work at all in snow. And no one has designed a wheelchair which provides protection from the elements, not even to equip them with an umbrella holder or snow tires. If outdoor travel poses problems for the manual wheelchair user, those using power-driven chairs are even more restricted. Despite misleading claims by manufacturers and assurances from most distributors, no electric chair currently on the market can be used consistently on rough terrain without experiencing breakdown. "Rough terrain" for an electric wheelchair can be merely a gravel driveway. Nor can electric wheelchairs be operated in inclement weather. They are heavy and cumbersome and not a "new" design at all, but merely a manual chair with a power device attached. The result is a chair with all the disadvantages of the light manual chair and only a limited advantage of its own. One researcher lamented:

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[38] Kirk, "Design For All Americans," HUD Challenge, March 1975, p. 26.

[39] Interview with physical therapist, George Washington University Hospital, June 3, 1976.

> The electric wheelchair design utilizes the type of components and methods of fabrication, connection and installation that are obviously not going to be adequate for any kind of trouble-free performance if the cart is to be used in the manner in which the advertising indicates it is able to be used...even during normal and careful use...it is undoubtedly going to have repeated malfunctions in terms of lack of motor power, inability to properly steer, the motor going off intermittently, etc.[40]

As with many products which are crucial to the life of the disabled consumer, everyday use is not only hindered by the frequency with which the wheelchair requires repair, but also by the availability of efficient, immediate repair. One commentator described this crucial aspect of the problem:

> When a wheelchair breaks down, the consumer is in a uniquely disastrous position; he or she depends on that product for his mobility. With no wheelchair to use, that consumer can not go to work, get to the bathroom, or get to the repair shop to have his wheelchair fixed.[41]

The above observations may be overstated since the survey we conducted revealed most wheelchair users own two or more chairs. These spares, however, are often older, less reliable models. This is especially true for electric wheelchair users. An old manual chair in place of a power-driven model is not a good substitute.

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[40] Letter from Cassius E. Street, Jr., of Anderson, Carr, Street, & Hornback to Ralf Hotchkiss, April 11, 1975.

[41] Kaplan and Lamson, "Remedies For Defective Wheelchairs," p. 2 (1976). Unpublished paper on file with the Center for the Study of Responsive Law.

This acute need for fast and efficient service is not reflected in the facilities or resources provided by manufacturers. Accounts of long delays in receiving parts, careless handling of replacement orders, and inadequate repair service for chairs returned to the factory under warranty were reported to us during our investigation. One man complained of waiting three months for parts ordered from the factory of one electric wheelchair manufacturer and when they arrived, they were the wrong kind. This problem is compounded by the lack of comprehensive service facilities offered by many distributors. While many distributors provide some repair service, few carry enough replacement items.

It would be misleading to represent the preceding comments as indicative of all wheelchair users or knowledgeable professionals. In some cases elderly users will not demand as much from their chairs as younger individuals and tend to be more satisfied with their purchases. In other instances there is honest disagreement as to the quality of the chairs currently being marketed. Timothy Nugent, Director of the Division of Rehabilitation-Education Services at the University of Illinois, Champaign-Urbana, states:

> It is too easy for people to speak of what they want, individually, with no particular concern for what it takes to achieve this. It is too easy for people to be critical and yet not offer any positive solution.[42]

And a long-time Philadelphia distributor commented that as far as he was concerned Everest & Jennings was producing "a damn good product."[43] He further asserted that the problems of repair we had perceived were really not problems at all. His store, for instance, was capable of creating a wheelchair of any size and with virtually any option. Moreover, he argued, instances in which his customers had been forced to suffer long delays in repairing their chairs were almost nonexistent due to the huge stock of replacement parts he kept on hand, as well as the full-time repairmen he employed. He further asserted that while he and the major manufacturers have "had their differences" over the years, he considered them to be "extremely concerned" with the welfare of their customers and dedicated to providing the best possible product at the lowest possible cost. He thought most of his customers and wheelchair users in general would probably agree with his observations.

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[42] Accent on Living, Summer 1976, p. 68.

[43] Interview with Nagel Birdwell, Accurate Medical Services, Inc., September 22, 1976.

We distributed a questionnaire to the Capital Chapter of the National Paraplegia Foundation and received their full cooperation to determine what one group of wheelchair users thought about their chairs. The results substantiate the contention that the basic wheelchair design does not adequately meet the needs of wheelchair consumers. Only 49% of those responding were able to state they were completely satisfied with the chair they purchased. Our survey of those purchasing a breast prosthesis (see Appendix B) showed a much higher degree of satisfaction. Sixty-four percent stated they were completely satisfied with their prostheses; 90% were either satisfied or somewhat satisfied, while only 10% were dissatisfied. It is not unfair to say, therefore, that manufacturers who can only satisfy less than half of their customers should review their product and their responsibilities to the customer.

The need for reliable medical equipment should be obvious. Yet "it is difficult for a person who is not handicapped," stated one wheelchair user, "to understand the social and psychological impact of trying to live a normal life with the fears of an equipment breakdown."[44] While 66% of our respondents said they were somewhat satisfied with their wheelchair, more than one-third could not make that minimal assertion. 34% stated they were dissatisfied.

What kinds of problems did our respondents encounter? 17% of those who mentioned either a shortcoming or needed improvement discussed a failing in the overall sturdiness of their product. One user poignantly stated her dilemma:

> In addition to the fact that wheelchairs are not all that well-made, once they start falling apart there seems to be no end to the replacing of parts and putting the chair in the shop. The brakes, the spokes and the backs are particularly fragile. I'm not particularly hard on a chair.

More specific problems mentioned with some regularity as particularly annoying included shoddy upholstery (17%) and unreliable wheels and tires (6%). One wheelchair user told of his solution:

> Rubber parts do not hold up; I go thru tires ridiculously often--I have now gotten 24" bike tires which I expect to hold up much better--that's what I used to use. Upholstery wears out too fast--E & J uses too poor a quality of naugahyde. I now have my own made--it's cheaper and lasts longer.

Other respondents mentioned problems with the seat, the back, the arm- and footrests. 17% answered with specific design shortcomings that ran the gamut from defectively designed "joy sticks" (the single lever on an electric wheelchair that controls movement) to the desire for a more aesthetically-pleasing chair.

The need for various design improvements seems beyond contention. As Dr. A. Bennett Wilson, Director of the Moss Rehabilitation Center in Philadelphia, stated:

> wheelchairs, while being quite versatile, are considered to be 'behind the times'. Good ideas have been put forth from time to time concerning...more useful wheelchairs...but for reasons

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[44] Testimony of Long Island University disabled student, Hearings on Consumer Protection For the Handicapped, NYC Dept. of Consumer Affairs, Nov. 17, 1975.

> that are not clear, there has been no widespread acceptance of the designs.[45]

The reasons are indeed unclear. Reflecting on the major criticisms against the wheelchair, lack of technical skill is obviously not the roadblock preventing these innovations. Nor would these improvements merely pacify the idiosyncracies of a small minority of wheelchair users. Our survey reveals a discontent reflecting the dissatisfaction of many. One explanation suggested by many individuals we interviewed was that implementation of design changes would entail a major re-tooling by the manufacturers. Such action would be costly--an unnecessary cost from the perspective of a manufacturer with a captive market. Elizabeth Scott of the St. Andrews College Public Interest Research Group (PIRG) stated:

> ...the manufacturers may well fear that our proposed analysis of the reliability of their products might force some expenditures for design innovations, just when things have been going so smoothly.[46]

A 1974 Job Start study adds further credence to this explanation.[47] The study reported that the plant, facilities, and machinery of the two largest wheelchair producers, E & J and Invacare, are so obsolete that neither company could change their present plant tooling in response to any major design changes. A design engineer at the Veterans Administration Prosthetics Center in New York City was more candid: "They don't want to be bothered."[48]

Beyond criticism, what solutions can be proposed? A boycott on such a product is impossible. Even selective boycotts on major manufacturers is impractical since their repair facilities and parts distribution, however inadequate, are often the only ones around. Individual complaints seem to prove ineffective in achieving basic design change since only a small percentage of consumers ever choose to persist in their complaints against the manufacturer or distributor.[49] Reports show that manufacturers make it a policy to remedy particular complaints rather than risk further publicity. This permits the manufacturers to "satisfy" random complaints that come to their attention while avoiding the more extensive, expensive design changes.

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[45] *Mobility For Spinal-Cord Impaired People*, *supra*, note 2A at iii-iv.

[46] North Carolina PIRG, News Release, May 10, 1976.

[47] Memorandum, *supra* note 18, at p. 86.

There is, of course, strength in many. Groups of medical equipment users are in many cases already organized around a common disability. The American Cancer Society, the National Paraplegia Foundation, the American Lung Association as well as other groups provide organizational structure and a base support which lends itself to group pressure aimed at reform. Initially, disabled consumers must be conscious of a rightful complaint and a possibility for effecting change. One group, the St. Andrews College Chapter of the National Paraplegia Foundation, provides an excellent example of possible action. They bought five shares of E & J International stock and as stockholders petitioned the board of directors to

> actively promote the well-being of their major consumers...by developing and implementing a model affirmative action plan for employing wheelchair users and publicizing the reliability records of both the wheelchair users and the wheelchairs themselves.[50]

Another group of disabled students are seeking redress against "unfair business practices" in the wheelchair industry. The Midwest Information Center for Equality of the Physically Handicapped at Southwest Minnesota State College established an information clearinghouse to improve the

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[48] Interview with design engineer, VA Prosthetics Center, New York City, June 28, 1976.

[49] see Best and Andreasen, "Talking Back to Business," Voiced and Unvoiced Consumer Complaints (1976).

[50] North Carolina PIRG, News Release, May 10, 1976.

quality and cost of a wheelchair purchase. Another affirmative action proposal could engage the influence of some government agency. The new Medical Device Amendments can be instrumental in eliminating serious safety hazards which threaten disabled consumers. The Amendments can be equally effective in removing "quack" products from the market such as arthritis-cure machines.

The Amendments' standards of safety and efficiency, however, have not been tested for quality control. Initially the Act classified manual wheelchairs as a product requiring performance standards, then subsequently re-classified them in a less restrictive general control category after the enactment of the amendments. Power-driven models, however, remain a class II product requiring performance standards because, according to one Medical Device Panel member, "a number of incidents were reported in which these chairs caught on fire."[51] Extensive product classification serves to inhibit internal reform because of the volume of work that standardization would create.

An alternative approach might be to use the Veterans Administration as a conduit for requiring quality control. As previously stated, the VA is the largest single purchaser of wheelchairs in the United States, acquiring approximately 20,000 chairs in 1975 at a cost of $3 million. All purchased items must meet the minimum standards established by the VA Prosthetics Center (VAPC) in New York City. The Center is responsible for at least two significant design innovations and for functioning as a "testing laboratory" for the medical equipment industry.[52] The VAPC is generally credited with forcing major design improvements in hand control adaptations for automobiles. After their initial testing revealed serious safety problems in many of the widely marketed models, they revoked their approval of all hand controls. This action forced both the industry and the VA Procurement Department into major revisions in the product. By threatening the industry with the loss of their extensive market, the VA succeeded in forcing the industry into manufacturing safer, more effective products in a relatively short period of time. A VAPC design engineer told us of another instance in which they asked E & J to build a prototype electric wheelchair that could provide more speed. After repeated requests were ignored, the VAPC employed the economic incentive. A boycott of E & J products for demonstration purposes was initiated within the VA, in addition to a halt in recommending any of their products. Within a few months E & J capitulated. The VAPC got its prototype designed with greater speed capacity as well as other design changes, but it had taken three-and-a-half years.

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[51] Letter from Dr. A. Bennett Wilson, Member of the Medical Devices Panel on Orthopedic Devices, Subcommittee on Prosthetics and Orthotics, July 22, 1976.

These incidents reflect the tremendous coercive power $3 million in annual sales represents. Theoretically the VA could improve the general design of the wheelchair by just requiring such a model. While the possibility exists, the VA's inclination does not. The VA views its responsibilities no further than a guarantee of minimum standards for the chairs they buy. They do not view their role as an advocate for disabled consumers. The VA's role, however, may be indirectly affected by the Medical Device Amendments. The Food and Drug Administration in many instances may adopt the VA's minimum standards as a control guide for the Amendments, thereby increasing the impact of the VAPC on the wheelchair consumer.

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[52] The material in this and the following paragraph is drawn from numerous interviews with VAPC professionals and from various VAPC written materials. See also footnote 48.

IV. Delivery System

> Dear Mr. Nader,
>
> Like many consumers I have been ripped off in many different ways but the last two have been the worst. I have for the last four months been trying to get back a deposit that I put down on a wheelchair for my son. When I ordered the chair I put $170 down... When I got to the store, it wasn't even close to what I wanted which was a junior size light-weight...I was told that Everest and Jennings was the only company that made a junior size and the price was $495...I have since learned that many other companies make that size and I could have gone out and purchased it from another company...Later, I was told by another person at the store that this was indeed a junior chair...Like I said...it wasn't right, so I asked them to order a correct one...When the chair came it was not the right size and the delivery man agreed. The next day I called the store and told them I would ask for my money back...I was told that I could only have $80 back because of the contract. I was at NO time told of any stipulations, told of a contract or signed one. I was very upset and later took back the $80 and told them I wouldn't accept anything but the full amount... [she never received it]
>
> I guess we will both hang in there. I am a fighter myself for the rights of the handicapped and the consumer. It sure isn't easy
>
> Thank you,[53]

The medical professional could provide unique assistance in determining the need, selection, and proper use of medical equipment and devices. While these products can be purchased without a doctor's prescription, few users go without some professional guide. However, the purchaser must often rely upon the retail distributor for this guidance. The responsibility for selecting, servicing, and ensuring proper use of the product is expected to fall at the delivery end of the transaction. The distributor, therefore, needs to possess the skill of the therapist, the medical expertise of the physician, the mechanical knowledge of the engineer, the understanding of the psychologist, and yet retain the instincts of a businessperson. With any responsibility so complex as this, some prominent motive will emerge as determinative. We have seen the profit motive surface continually. From our respect for private enterprise we have bestowed upon an average group of business people a role of pseudo-medical practitioner, without requiring any special expertise or character. We have exposed people in need of real medical and human assistance to those motivated by the profit instinct. The results are predictable. A number of extremely ethical organizations exist which have recognized their responsibilities and serve their customers with professional skill and compassionate grace. There are too many establishments, however, lacking all of these attributes.

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[53] Complaint letter to Ralph Nader, 1976.

In a statement before one of the FDA Medical Devices standard-setting panels, Dr. Edward Hardick of the Wayne State University Department of Audiology said:

> My audiologist colleagues consistently reported to me that auditory training units presently available in the marketplace range from acceptable systems to 'junk'. For the most part auditory training units are sold by salespeople who have no relevant training or background in hearing loss, electronics, or acoustics.[54]

One medical equipment distributor in Washington, D.C. has only a telephone number and post office box listed in the telephone directory. We were told of a store in Ohio which charged an additional fee to readjust leg braces even though the extra work was caused by its error. Standards sufficient for distributors of small appliances cannot be acceptable in the medical equipment industry. A purely business attitude can result in unnecessary physical and emotional discomfort for the disabled consumer.

We canvassed a number of medical equipment distributors in the Washington, D.C. area and were disappointed with the results. Many salespeople seemed to lack an understanding of basic wheelchair design and optional features. Everyone stated they could provide an electric wheelchair for use both indoors and out on all kinds of surfaces. The

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[54] Minutes, ENT Subcommittee on Hearing Aids and Audiometric Devices, May 19, 1976, appendix, statement by Dr. Hardick, p. 24.

VA Prosthetics Center as well as various other engineers have told us that such a broad assertion is simply untrue. A few representatives told us that oxygen bought from a welding supply house could not be used for medical purposes. This is untrue. It is the need for cleanliness that differs, not the substance itself.

One salesperson at a "medical pharmacy" refused to provide us with any information. He told us on the phone we would have to "come in and browse around," if we wanted to find out anything. When we asked if disabled persons seeking the price of a particular product were also required to "come in and browse around," he refused to discuss the matter further. In response we sent them a questionnaire covering what we had intended to ask over the phone. They returned the survey unanswered with an E & J "pocket catalogue." This questionnaire was sent to over forty other medical equipment distributors in Philadelphia, St. Louis and Washington, D.C. We received only three responses, including one from a non-profit self-help organization for the disabled.

A. Case Study: Respiratory Equipment

Mr. Jones is a chronic obstructive pulmonary disease (COPD) patient who returned to the hospital suffering from emphysema or chronic bronchitis. After a few weeks' treatment he will be able to return home, but his reappearance at the hospital is likely. His disability may require use of various apparatus as simple as a nebulizer--a device which assists in placing medication into the lungs--or as complicated as an Intermittent Positive Pressure Breathing Machine which uses pressurized air or a mixture of air and oxygen to deliver medication into the lungs. Ten or twenty years ago a COPD patient would have been confined to a hospital for treatment. The increasing popularity of medical home care, however, has resulted in the use of respiratory therapy equipment in the homes of many people suffering from pulmonary disease. This approach seems more desirable, less expensive, and provides the benefit of comfortable surroundings and familiar faces. Unfortunately, Mr. Jones and other OCPD patients have their health endangered by the same medical equipment designed to save their breath.

Most of this equipment is complex and extremely sensitive. Its proper use requires that the patient has a basic understanding of the equipment which must be kept meticulously clean. Improper hygiene builds up bacteria in the apparatus which is then deposited with the medication into already-diseased lungs. Within a few weeks such an infection produces acute breathing problems which require another stay in the hospital. Death, of course, is always a possibility. As one respiratory therapist complained:

> It really gets depressing. A patient will spend X amount of time here receiving constant and careful care and finally will become strong enough to go home. They will have a machine or oxygen prescribed by their physician placed in their home so that they can continue to receive care. In a month, or two or three, back they come, so infected they can hardly breath and we have to start all over again. This happens time and time again.[55]

A less frequent, but potentially more serious problem, arises from a patient's inability to maintain the machine in proper working order. We received a number of accounts where individuals returned to the hospital with deteriorated conditions due to their improper assembling of the machine. Other serious problems occur when patients who have not been informed of the consequences increase the amount of oxygen they are receiving based on the "more is better" theory. Oxygen, however, is toxic in large quantities, especially for individuals with respiratory problems. Although fatalities are unusual, a respiratory therapist reported one such case he had witnessed. The problem has become so serious that one manufacturer introduced a "sham" flow meter which is permanently set at two liters-per-minute but includes a regulator which appears to increase the oxygen flow, ensuring that the patient will not be able to turn up the oxygen flow to a harmful level. These problems are compounded, therapists tell us, by the dependence many people develop on this complicated machine for its reassuring effect--a dependence which only increases anxiety when the machine malfunctions.

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[55] From a series of interviews with George Washington University Hospital respiratory therapists, July 26, 1976.

On whose shoulders should fall the responsibility to maintain this equipment? Who should ensure that users understand the need to keep their equipment clean? Ideally, these services could be met through hospital out-patient programs which have been initiated in some cities. The overwhelming majority of home respiratory therapy, however, is handled by the medical equipment distributor. The distributor is delegated the responsibility of educating the patient in the proper use of the equipment. The patient must rely on the distributor for the psychological assurance that the machinery will function properly. These responsibilities, rather, should be met by trained personnel who can conduct an initial lecture, describing proper hygiene, safety procedures, and assemblage of the equipment. In addition, respiratory therapists trained in all aspects of rehabilitation therapy should follow up on the status of the patient. At a minimum, those who make the initial contact with the COPD patient should be trained by qualified instructors in order to inform patients of their responsibilities. Many distributors never bother to use qualified personnel or to acquaint themselves with the most basic requirements of proper respiratory therapy equipment use. As one therapist described it:

> It was just terrible. Patients were buying equipment from drug stores and then calling frantically asking us for instructions. I saw welding supply houses delivering oxygen equipment because their price was the cheapest. Whoever was doing the reimbursement didn't even realize that there was anything wrong.[56]

Another told of his experience:

> It was not uncommon for us to find a patient with equipment black with grime, almost useless because of the crap. We'd find oxygen units on stairsteps or next to the heater. I saw one guy using his IPPB and smoking a cigarette at the same time. No one had ever told him not to do it.[57]

Recognizing the serious need for reform, the D.C. Lung Association and the D.C. Thoracic Society attempted to persuade area distributors either to employ trained respiratory therapists to administer their equipment setup or to require their employees to attend a short course in its use. While only twelve distributors complied, our investigation revealed that area distributors claimed to use respiratory therapists for the initial visit. Two distributors we discovered, and more from the reports received, continue to subcontract their oxygen therapy equipment orders to a general supply house. In addition, many of the respiratory therapists interviewed expressed dissatisfaction with the training of the non-therapists who were still servicing patients. Our calls to the Baltimore County Lung Association and the Lung Association of Alameda County (California), indicated much less reform. Both groups were only mildly aware of the problem and guessed that the use of trained personnel was not the rule in their areas.

Though some distributors utilize trained personnel for reasons of ethics or competition, other distributors use a more unscrupulous method of attracting customers. On repeated occasions we were told that it was not uncommon for hospital therapists to refer patients to a particular distributor in return for a "referral fee." Nagel Birdwell, the owner of a chain of supply equipment stores in Philadelphia, admitted that there were "pockets around the country"where such activity was pervasive, but said that in general it was not a serious problem. A distributor in the Washington area claimed such a practice was "rampant" in the Baltimore region, but except for a "borderline case" it was not occuring in Washington.

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[56] Id.

[57] Id.

Who can supply follow-up supervision to ensure the equipment is in working order? While trained personnel are necessary to instruct the consumer at the initial purchase, periodic follow-up by trained personnel is almost as essential. These visits ensure that the machine is functioning as it should, the patient is caring for it properly and benefiting from its use. The greatest obstacle presently standing in the way of follow-up care is that such visits by a therapist are not covered under Medicare.

One company, National Home Respiratory Care Services, Inc., however, offers a total care package which includes an initial visit by a trained therapist and monthly follow-up visits by the same therapist. The organization obtains most of its customers from therapists themselves. When a patient is ready to leave the hospital, the affiliated therapist suggests the patient obtain their needed equipment from N.H.R.C.S. If they agree, the therapist sets up the appropriate machine supplied by N.H.R.C.S. and receives an installation fee, usually five to ten dollars more than the standard rate. The original therapist returns monthly to check on the patient and the machinery, and responds if there is an emergency.

Critics of this new organization cite the danger of mixing a professional decision with commercial remuneration. The practice does not violate any law since company policy gives remuneration to any therapist who sets up equipment regardless of whether they were responsible for procuring the customer.

The lack of an organization which could provide emergency service is also criticized. At the same time it is likely that the cost of such service would be prohibitive or would be compensated by an increase in equipment costs or by irregular equipment replacement and/or repair. Responsive emergency and follow-up service should be encouraged, nevertheless, and obstacles to its development should be removed. The Medicare Act could be amended to permit compensation. This would enable COPD patients to receive the benefits of expert supervision on a continuing basis. A bill to enact such an amendment is expected to be introduced by Congresswoman Spellman next term.

B. Case Study: Breast Prostheses

The breast prosthesis or artificial breast is another product involving sensitive responsibility. In 1974 90,000 men and women contracted breast cancer. Approximately 50 of every 1,000 women in the U.S. are afflicted, according to a Gallup survey conducted for the American Cancer Society.[58] This fact and its consequences have received enormous recognition in recent years, resulting in an appropriate re-examination of the predominantly male medical profession's approach to a substantially female affliction. Despite a new consciousness, breast cancer remains a traumatic and sensitive condition. One commentator explained the problem this way:

> What is it really like to lose one or both breasts? Women who have had a mastectomy say they feel like 'damaged goods'...They may manage to keep up a veneer of cheerfulness

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[58] Asken, Psychoemotional Aspects of Mastectomy: A Review of Recent Literature, 132 American Journal of Psychiatry. 56 (1975).

> demanded by hospital life; in reality, they are in desperate need...of help and support.[59]

The seriousness and extent of the trauma cannot be understated:

> The patient who has had a mastectomy for a malignant condition knows she may not be 'cured.' She has to live with the knowledge that metastases are a real possibility, and that even if she gets over the operation well, the future is not going to be easy.[60]

Another mastectomy patient commented:

> From the moment my physician said that I had metastatic breast cancer until two years after my surgery, I was frozen with fear...The threat hung over me day and night.[61]

Recognizing these effects of mastectomy, responsive and knowledgable personnel is crucial for the purchase of the breast prosthesis. A salesperson whose compassion is obvious helps to lessen the trauma which accompanies these circumstances. The customer's well-being relies on a product which looks and feels natural. The fitter must be adept enough to match the user and prosthesis properly. "Restoring the body image," stated one commentator, "is such an important part of rehabilitation that it is essential to see the patients have the best that can be provided.[62] One of our survey respondents affirmed this eloquently:

> My first conscious thought after the mastectomy was not about the cancer I had, how pervasive it was, my life expectancy, the kind of treatment I might require, etc., but about how I was going to look and how soon I'd be able to wear a prosthesis. It was only when the "Reach to Recovery" representative called that I obtained by first real reassurance.

While 90% of those answering our user survey (Appendix B) were satisfied with the service they received when purchasing their prosthesis, a smaller number were pleased with the actual fitting procedure. 20% stated that the fitter had been inadequate or merely average. Many of the comments reveal the emotional hardship that results from even a few incompetent or insensitive sales personnel. One woman stated that she had "thought it was a rip-off." Another complained that the person who had helped her "was obviously untrained, ill-at-ease, and had limited knowledge of the stock." A third woman apologized for the few comments she had made, explaining she had "blotted a lot of the experience out of her mind." The results of the survey indicated a minority who actually had difficulty in the purchase of their prosthesis, yet some women were still subjected to unnecessary embarrassment and discomfort.

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[59] Anstice, "The Emotional Operation," Nursing Times Magazine, 1970.

[60] Anstice, "Coping After Mastectomy," Nursing Times Magazine, 1970.

[61] Asken, supra.

[62] Anstice, supra note 2 at 4.

One way of mitigating the trauma could be an increase in available pre-sale information for the mastectomy patient. Many of our respondents stated they would have felt more confident if instructions had been given in the fitting of a prosthesis as well as more detailed suggestions concerning the styles and prices on the market. Since dissemination of such information to the general public would reach few actual mastectomy patients, a more effective reform might be to require those who sell and fit breast protheses to undergo training to meet the physical and psychological needs of their customers.

V. Solutions and Attitudes

Our study has revealed evidence that disabled citizens must rely on inadequate service and devices from the medical equipment industry. If we are to be responsive to their needs, regulatory constraint would seem essential. Not only is it medically sound to require properly trained employees to introduce such products as breast protheses, wheelchairs, and respiratory therapy equipment, it is also compassionate policy to ensure the responsibility of sensitive personnel in the medical equipment delivery system.

A state licensing requirement which would mandate such practice is one possibility. Another approach would propose a standard for medical distributors by the Social Security Administration. Compliance could be a prerequisite for Medicare reimbursement. A similar approach has been used to regulate medical diagnostic laboratories.[63] Those in the industry contend that any type of licensing would increase prices to the consumer without providing additional protection. They argue that most medical equipment distributors are ethical business people and if problems exist they derive from the few who entered the business since the Medicare system was enacted. Even if these assertions are true, the risk of serious harm by a few establishments should be enough to justify some regulatory control. The sensitive nature of medical equipment requires a greater degree of responsibility from those who service and sell them than for other manufactured products.

Within the medical profession itself, our survey found a serious lack of responsibility being assumed for patients using medical equipment. General practitioners did not seem to understand when respiratory equipment should be prescribed or what tests were needed for that determination. Such dissatisfaction was expressed by Dr. Thomas Petty in a 1975 *Chest* editorial:

> With the good clinical experience and controlled scientific data, this monosynaptic response (of prescribing oxygen when a patient has a breathing problem) is no longer tenable. Medical and financial audits should no longer allow such abuses.[64]

Beyond the lack of specific technical knowledge, our survey uncovered a lack of specific concern for the patients. The most frequent problem that "Reach to Recovery After Mastectomy" volunteers encountered was the refusal by operating surgeons to allow them to see the patient. This refusal deprives patients of essential supportive services not provided by the physician.

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[63] 41 Fed. Reg. 121 (June 22, 1976)

[64] *Chest* 481 (1975).

Our survey revealed additional complaints against occupational and physical therapists who lacked knowledge of medical support equipment used by patients they were treating--such as a physical therapist who did not know how to fit or adjust a wheelchair. Similar complaints were directed toward vocational rehabilitation counselors who were not sensitive to the consequent difficulties of their disabled clients--such as a quadraplegic who was unable to repair his wheelchair because the counselor would not bring out the reimbursement on the weekend.

Most complaints our survey recorded revealed the same difficulty whether a medical professional, a counselor, or an equipment distributor was involved. These professionals and service personnel were not disabled themselves and lacked the understanding of these problems. Physical disability creates discomfort for the disabled and for those who lack the knowledge to respond appropriately and so remain embarrassed. Since support personnel cannot experience the hardships caused by these disabilities, we must listen to the disabled and respond to their needs as they define them.

VI. Proposals for change This report recommends that:

1. Medical personnel and medical equipment distributors receive:
    a. training in the proper and safe use of all products which they prescribe or sell;
    b. appropriate medical information that is pertinent to the selection of the correct product for each individual consumer;
    c. Sensitization training in the special needs of disabled consumers.
2. Inclusion of disabled consumers in:
    a. the selection and evaluation of medical devices subsidized by third-party insurers;
    b. setting priorities and policies of the medical devices industry.
3. Rigorous federal enforcement of:
    a. medical devices product safety legislation;
    b. anti-trust legislation with respect to the medical devices industry.
4. Increased and stronger consumer organization to demand product safety, quality and efficiency at reasonable prices.

Appendix A: Wheelchair User Survey

The survey was distributed to the Capital Chapter of the National Paraplegia Foundation through their monthly newsletter; the results are based on the seventy responses we had received at the time we began the compilation. N refers to the number of respondents to a given question.

1. To what extent are you dependent on your wheelchair?

completely	60	88%	
most of the time	7	10%	N=69
occasionally	2	2%	

2. How many wheelchairs do you own?

one chair	19	28%	N=67
two chairs	37	55%	
more than two	11	17%	

3. When did you receive your last chair?

within the past year	17	26%
1972-74	31	48%
before 1972	17	26%

4. How much did it cost?

$300 or less	9	16%	
301-400	8	14%	
401-500	14	25%	
501-700	15	26%	
701-1,000	4	7%	N=57
1,001-1,200	4	7%	
over 1,200	3	5%	

Average price of all chairs: $594.74. Average of manual chairs: $511.
Average of electric wheelchairs (7): $1,200.

written comments

** I have never been in sympathy with the suit against E & J. It is a wasteful harassment of a company turning out a first-rate product. After all, if as good a wheelchair could be made at lower prices, some competitor would do it.

** I have been paying 20 dollars a month to rent a chair for seven years.

** Price of E & J chair twice the price of chair in England.

** In Japan the same E & J chair sells for less than one-half the price in the U.S.A.

5. What special features were added to your chair?

no special features	19	27%	
swing-away, detachable footrests	18	28%	
desk arms/wrap-around arms	25	42%	N=70
pneumatic tires	7	12%	
reclining back	2	3%	

Other features mentioned: higher than normal back (5), reduced size (3), pegged handrims (2), heavy upholstery (2), higher seat (2), caster locks, arms locks, metal heel stops, shorter leg supports, fixed arms, hard seat/back, brake extenders, rising footrests, wide rubber tires, toggle brakes, wheelie bars and roll bar, quad controls, higher arm rests, joy stick, height adjustable, back extension, lowered armrests, narrowed seat, heavy-duty sprockets.

6. Did anyone buy your chair for you or pay part of the cost?

no help	21	37%
VA	5	9%
Medicare	6	10%
Blue Cross/Shield	5	9%
other health insurance	5	9%
State department of vocational rehabilitation	8	14%
other:	7	12%

private charity (2)
gift (2)
Medicaid (2)
Workman's Compensation

7. Do you know if any type of guarantee came with your chair?

don't know	32	50%	
1 year	8	13%	N=64
6 months	2	3%	
life on frame	4	6%	

other:

"yes" (7)
"standard E & J warranty" (2)
90-day
three years
limited
stated there was no guarantee 6 9%

27 answers (42%) mentioned some type of warranty

written comment

•• I think it might have been used although I paid for a new chair.

8. If you selected the chair yourself, why did you choose the one you did?

reputation of the manufacturer	9
different/better design	9

other:

fit my needs (7)
habit
price was low
only kind I knew of

9. Some people use the following aids to help them make their selection. Did you use any of these?

N=71

recommendation of doctor or other professional	32	45%
catalogue or brochure of the manufacturer	20	28%
comparison shopping at different stores	4	6%

other:
reputation of the manufacturer (2)
experience (7)
salesperson suggested it (3)
allowed a pre-purchase trial
only kind dealer sold
inexpensive

(more than one response permitted)

10a. How would you describe your experience with the chair you purchased?

Satisfactory	34	49%
Somewhat satisfactory	12	17%
Somewhat unsatisfactory	17	24%
Unsatisfactory	7	10%

N=70

Some degree of satisfaction: 66%; some degree of dissatisfaction: 34%.

10b. If you checked unsatisfactory or somewhat unsatisfactory, what was the problem?

durability	2	back	3
price	2	arms	2
misfit	4	footrests	3
upholstery	6	seat	2
wheels and/or spokes	3	general design	7
motor, battery or electric workings	2		

written complaints: standard model, has no back support; footrests stick out too far; swing-away footrests are clumsy; no tail wheel to allow curb climbing; desk arms are defective; footrests are defective; speed switch is poorly designed and could be redesigned but E & J is not interested in this. Belts also squeal; arms are plastic and keep breaking; no back support; impossible to get versatile chair; skirt panel rubbed against large wheels; seat is too high, back too low; stainless steel has rusted; everything's wrong; heavier than expected, plastic breaks easily; should be narrower; spokes and wheels aren't well-made.

written comments

•• Still using chair designed for me in 1939. Impossible to get all-purpose wheelchair. Should be easier to propel and to control on downgrades.

•• In addition to the fact that wheelchairs are not all that well-made, once they start falling apart there seems to be no end to the replacing of parts and putting the chair in the shop. The brakes, the spokes, and the backs are particularly fragile. I'm not particularly hard on a chair. Chair has gone up to $450; that is really preposterous. I'll struggle along with the one I've got.

•• Too heavy, another salesman said that the weight estimate I was given for my chair was with the footrests and armrests removed.

10c. Did you do anything about your dissatisfaction?

yes	12
no	4

result if 'yes':	
unsuccessful	7
successful	2
partially successful	1
didn't say	2

10d. If you answered that the wheelchair you received was satisfactory or somewhat satisfactory, how could the chair have been better?

better upholstery	5
cheaper	7
lighter	4
sturdier	6
narrower	1

written comment

•• This chair is satisfactory. The last two were unsatisfactory; first chair was too large with too many unnecessary parts, second too low.

10e. Do you have any specific suggestions for the manufacturer that would make the chair better for your purposes?

arms	21	design	7
footrests	2	upholstery	3
seat	2	sturdier	7
back	2	price	2
electrical parts	1	wheels/tires	2

written-in items: back should be higher and with some type of bar; better upholstery; better quality plastics; umbrella stand/rain covering; traction on tires; better footrests; stronger; lower prices; better tires; faster; a pocket on the inside to store things; plastic guide rails in back keep breaking; should resist rust; tires and odd sizes are not available; stronger forks, stronger hand rims; point of movement where the wheel axles attach to the side pieces should be stronger; shock absorbers; seat needs to be improved; better seat material; more quality control; stronger axles and spokes.

written comments

•• ...poor recording or poor interpretation of design specifications for the chair when producing brake assemblies; replacement brake assemblies are almost always incorrectly manufactured.

•• Prices are of course outrageous, but E & J, true monopoly, control prices.

•• I am a 26-year-old female paraplegic living alone. A cheaper sturdier and if possible "trimmer" chair would be most helpful.

•• E & J are poor in repairing their chair and full explanatory booklet does not come with chair. Lower prices, chairs should be more adaptable to the person. Our lives are tied to our chair. We want to get out more often. The chairs are not adaptable. Too much advantage is taken of the handicapped as a whole.

•• I'm an active wheelchair user; I drive my own car, load and unload my chair, I hold a full-time job and also travel by air.

** Stop cornering the market. You are known for making the best chair in the world; why charge the highest prices too--it isn't needed. Besides the people who are most apt to buy your product are the least able to afford and will guarantee to keep you in business.

Summary of responses to questions 10b, 10d and 10e:

no problems or suggestions	4	5%	N=86
lighter	4	5%	
price	10	12%	
sturdier	15	17%	
misfit	4	5%	
upholstery	14	16%	
wheels/spokes/tires	5	6%	
motor/battery/electrical	2	2%	
back	5	6%	
arms	3	3%	
footrests	5	6%	
seat	4	5%	
general design	15	17%	

11. How long on the average does a particular wheelchair last for you?

One I'm using now my first, still going strong 15 29% (N=52)

Of those who listed a specific time:

up to 3 years	4	11%	N=37
3 to 4 years	6	16%	
5 to 7 years	8	22%	
7 to 10 years	8	22%	
more than 10 years	9	24%	
didn't know	2	5%	

12. What kinds of repairs have you had to make to the chair since receiving it?

none	5
spokes and wheels	21
new upholstery	11
footrests	2
armrests	6
frame	1
brakes	5
general repair	14

13. Who usually makes the repairs for you?

medical supply house	27	54%	N=50
special wheelchair repair store	1	2%	
bicycle repair shop	2	4%	
personal or a friend	20	40%	

14. How would you describe the repair service you received?

satisfactory	44	75%
somewhat satisfactory	7	12%
somewhat unsatisfactory	3	5%
unsatisfactory	4	7%

written comments
** Service has always been prompt and courteous.
** My dealer (one of few) was especially knowledgeable and thus able to provide good service even at non-customary times.

14a. If you checked unsatisfactory or somewhat unsatisfactory, what was the problem?

price	5
delay	6
impolite	1
bad work	2
hard-to-get parts	1
unnecessary work done	1

written comments
** Repair: Never satisfactory from wheelchair companies; expensive and out of reach. Mostly inconvenient because of non-neighborhood location and need to leave chair for a period of time. Convenient location of my present chair was one of the determining factors that made me buy my chair there.
** Appliances, services, and treatment for disabled cost too much! Help!
** Abbey Rents never has parts in stock--no weekend service. Their people aren't well-trained in electric wheelchair repair and have no loaners.

14b. If you checked satisfactory or somewhat satisfactory, how could the service have been better?

** could have serviced chair better before delivery
** could be more properly equipped when coming to fix the chair
** could be more quick with repair services (5)
** less expensive (3)
** location could be more convenient

Appendix B: Breast Prosthesis User Survey

This information was complied on the basis of 96 responses to a questionnaire distributed to 250 women who had recently undergone mastectomies, and had been contacted by the Reach to Recovery program of the American Cancer Society, Washington, D.C. Chapter.

1. When did you buy the prosthesis you are now using?

within the last year	74	91%	
between 1972-74	0		
between 1970-72	4	5%	N=81
before 1970	1	1%	
no answer/don't know	2	3%	

2. What type of prosthesis is it (style, brand)?

foam rubber/fabric	1	4%	N=24
gel/liquid/silicone	22	92%	
air-filled	1	4%	

Brand:

Jodee	14	18%	
Tru-life	3	4%	
Montgomery Ward	2	3%	
Airway (Companion)	33	43%	N=77
Camp	16	21%	
Truform	2	3%	
Other	7	9%	

3. How much did you pay for it?

$10-20	2	2%	
21-40	8	10%	
41-60	27	33%	N=81
61-80	8	10%	
81-100	33	41%	
over 100	3	4%	
don't know/ no answer	15	19%	

4. Why did you select the one you did?

Natural-looking	1	1.5%
advice of nurse or doctor	5	7%
advertisement in newspaper	5	7%
advice of salesperson	17	25%
tried several styles	14	21%
advice of friends	16	24%

read article in Consumer Reports	4	6%	
read Reach to Recovery material	2	3%	
made it myself	1		N=67
mailorder catalogue	1		
representative brought it by; I'm on Medicaid and they tell you what to buy	1		

5. Some people use the following aids to help them make their selection. Did you use any of these?

samples from Reach to Recovery	21	35%	
comparison shopping at different stores	14	24%	N=59
advice from doctor or other professinnal	24	41%	
manufacturer's catalogue	0		

written comments

** Dissemination of up-to-date information to mastectomy patients by reliable people like the Cancer Society about forms and bras would be helpful. Usually mastectomy patients must seek out this information.

** I would have liked it and been better helped if Reach to Recovery had made some suggestions about what kinds were available and shown me some samples or sent me some written materials describing the various kinds, makes, etc.

** Until my second surgery...I had no idea as to what to really look for in prostheses. After my first surgery...I bought a Lovee. I was satisfied but Lovee went out of business. Had to buy a different brand--bought a Jodee. I never liked it, as it was a movable jelly-like substance and very heavy. Then I talked to a nurse at Walter Reed Hospital. She told of the unnecessary cost, how we patients are subjected to much unnecessary hassle. Then the lady from the Cancer Society called on me and gave me the Reach to Recovery forms. They are a joy to wear, so light, cool and comfortable. Believe me it was a far cry from previous experiences--$30 for the first bra and one prosthesis, and $60 for the second. Reach to Recovery is certainly a huge step for help to future mastectomy patients.

** I never saw anyone from the Reach to Recovery program. That was my doctor's decision. It would have been helpful if I could have gone to the Cancer Society to look at the samples made available through the Recovery program.

** I wish some survey or study could be made of the doctors who perform these operations. It seems to me more honest information is due to the patient. No one ever told me what to expect or what the pains or problems would be, and what I would have to learn to live with--permanently.

** I've never visited any of the stores to look at other prostheses but the one I have needs to be expanded to cover hollow places. I'm very self-conscious about this, but Medicaid doesn't allow but approximately $40-50 for a prosthesis. This is unfortunate for us, especially me, since I'm quite young and take pride in my body's appearance. I'm not vain but I'm just a normal woman.

6. Do you know if your prosthesis carried some type of guarantee?

yes	42	58%
no	21	29%
don't know	9	13%

up to a year	7
2-5 years	13
more than 5 years	18
"guaranteed against manufacturer's defects"	2

written comment

** I was assured it would be replaced if there were any problems.

7. Would you describe your prosthesis as being:

satisfactory	53	64%	
somewhat satisfactory	22	26%	
somewhat unsatisfactory	4	5%	N=83
unsatisfactory	4	5%	

written comments

** I think the prosthesis is fantastic. I don't even know I'm wearing it.

** I am very pleased. It is comfortable, and no one knows "which one."

** I purchased my prosthesis fairly soon after my hospital discharge and I guess I've blotted a lot of the experience out of my mind.

** Since I have had recent surgery, I'm still experimenting...but I'm perfectly satisfied and would return in a minute.

** Am well satisfied with Airway. Play golf, swim, have even swam in ocean recently.

** I wish all women who have had mastectomies could buy a prosthesis to fit her. I feel like a woman again. Because if you are fit correctly with a prosthesis you can stand in front of a mirror and say "not bad, kid!"

7a. What was the problem, if you checked unsatisfactory or somewhat unsatisfactory?

items listed: prosthesis losing its shape; rubs against the skin, irritates; was told to buy two sets so that I could have one while washing the other. Found out later that I couldn't wash them!; The prosthesis was too heavy and probably not the best for a recent incision; the prosthesis seems to be losing stability of fullness, it crumples; too heavy for me; hard and uncomfortable and not a good shape under your clothing; thought it was smaller than the other breast when I bought it and now I'm sure of it.

written comments

** It is a pity that the prosthesis cost so much and I am told they last only a few years.

** Hospitalization should have taken care of the cost. They are very expensive.

** Developed a contact dermatitis; my doctor gave me a cream to clear it up.

** After surgery I did not feel like going to many different stores. In my area the department stores were closest so I shopped in the mall close by. I still am not satisfied with the form I have to use in my bathing suit. The "Companion" is not guaranteed and I was warned to be careful in my handling of the prosthesis. I have been afraid to wear it on the beach for this reason. I do not need a special type of bathing suit, but when I bend over you can see the empty space even with the rubber form I have pinned in the bras of the suit.

** Special bras are ridiculous in price. By keeping the form in mind while shopping, I have had no trouble in finding a well-fitting bra.

** I have had my prosthesis for only 8 months. One reason I bought the "Jodee" brand was because of the guarantee. I had been told the other brands only lasted about 2 years before they lost their shape. I think it is terrible for us to have to put out anywhere from $25 to $125 every 2 years so we can feel and look normal. It seems to me that something else could be developed that would last longer.

** After my operation in November of 1975, I started wearing the A.C.S. temporary form. It was very good but unless I had my bra on tight it rode up because of its lightness. Then I made a form from birdseed in a nylon stocking. It worked very well but it was unnatural to the touch. I recently went shopping for a permanent prosthesis. I wanted to get the best possible one and judging from the prices, I thought it was the silicone-filled one. But they were not as good for me as the temporary ones I had been using as they didn't fill the space on the side resulting in a very lopsided appearance.

** I am glad to hear that a suitable prosthesis is becoming available for black women. I can imagine the anguish, insult, and injury of a black woman having to wear a white or pink prosthesis.

7b. Did you attempt to do anything about your dissatisfaction?

yes	2
no	3

7c. If yes, what did you do?

returned item to the store (2)

7d. What were the results of your action?

refund (2)
"just threw it away"

7e. If you checked satisfactory or somewhat satisfactory, how could the prosthesis you purchased be better?

better fit (weight, slides up, etc.)	14
should come in different skin tones	
wider variety of sizes	2
the bra for the prosthesis loses shape	
price	3
should have better covers	
should extend around sides	2
should last longer (gel evaporates)	2
silicone-type form gets hot next to the skin in warm weather	8
should be manufactured better	
weight of the prosthesis causes it to pull to the center of the chest	
the prosthesis should come with a container for storing when not in use	
discontinue elastic straps	
it could feel more natural to the touch	
the surface touching the skin should be improved	
imbalanced, too thick...sometimes flips; presses too hard; should be wider and tapered	
prosthesis moves, feels sticky on the skin and itches	

written comments

** I have purchased two and neither one is really a good match. One is a bit small and the other a bit large...It seems that an exact match is not made.

** I was very unhappy with the high prices. I think mastectomy patients are taken advantage of by the prosthesis companies. I think they could manufacture them at a lower cost.

** The bra is overpriced ($20)...Although I am quite satisfied with the prosthesis with regard to its comfortable and natural fitting, I was distressed to hear that the price of the prosthesis had been increased $10 recently. I cannot understand this. It appears to be a simple device.

** I would like an inexpensive prosthesis to use in bathing suits, one that will not retain water.

8. What kind of bra do you use with your prosthesis?

ordinary bra	45	53%	
ordinary bra altered by yourself	8	9%	N=85
bra specially designed for prosthesis use	31	36%	
other (cut-up old slips)	1		

9. How did you decide on the kind of bra to use?

Reach to Recovery recommendation	3	5%
fitter/salesperson	30	55%
recommendation of doctor or other professional	3	5%
tried different kinds	14	25%
"only one that would work"	2.	4%
"Jodee breast form is normally sold with Jodee prosthesis"		
"insurance was paying for the bra"		
"came with the prosthesis"		

10. What brand or style of prosthesis did the salesperson recommend? (insufficient responses)

11. What reasons were given for that recommendation?

seemed to fit best	10	
only type store sold or had in stock	10	
thought it was the best for my needs	7	
personal experience of the fitter	5	
prosthesis didn't need a special bra	4	N=38
cheaper	2	
large bust		
more natural-looking		
"handmade craftsmanship"		
prosthesis had a guarantee		

12. How many kinds and sizes of prostheses did the salesperson show you?

just one	7	14%	N=51
2-3	32	63%	
more than 3	12	23%	

13. Thinking about the fitting of your prosthesis, what is your opinion of the assistance you received?

excellent	37	52%
good	20	28%
average	5	7%
inadequate	9	13%

written comments

** person was willing but not able; the fitter was excellent; gave me good guidance; couldn't have asked for more understanding and able assistance.

** The salesperson was knowledgeable and cared. Fussy about the fit.

** I thought it did not fit, but they still insisted it was the correct size and better looking than any other.

** Fitter was well-informed, sympathetic.

** The salesperson I had definitely knew her business and was both kind and efficient.

** I was embarrassed and disturbed--actually thought it was a rip-off when they wanted to sell me a special bra.

** She was kind but fitted me with the wrong type--it was too heavy.

** Beautiful! Was very patient and helpful. Took lots of time.

** First time, very good. Second time only wanted to make a sale.

** Great, it was a relaxed atmosphere. They let me cry, and gave me coffee. Offered to put in pockets in the bra at no extra charge.

** She said it fit me perfectly and that I had to get used to wearing it. I found it uncomfortable.

** Very good at a small private shop; hurry, hurry at the department store.

** Excellent and very understanding. Clerk had had mastectomy herself and understood the problems. She took a great deal of care in finding a satisfactory prosthesis and bra, and was familiar with her stock.

** Excellent...knew what she was doing and had much compassion...wonderful service; she told me she had done this for 20 years.

** The fitting didn't seem right to me at the time, both in bra size and cup size--it hurt and felt tight and I said so. But although healed, I was still hurting and the fitter assured me it was supposed to feel that way.

** I would have been happier had there been a larger selection and had the salesperson given me more of a size choice.

** The fitter was only interested in making a sale and not in me. Gave me a larger size than I needed and I had to exchange it a week later.

** Fitter was obviously not trained--was ill at ease--had limited knowledge of the stock.

** I found the service given by the fitter to be excellent. I can understand why some women would be deterred from buying a prosthesis when buying from a regular salesperson. My experience in buying after a mastectomy, in asking for my size and type of bra is that they seem to disregard my wants. As soon as I mentioned why I needed a special bra the salesperson falls apart as though I might force her to look at my incisional area.

14. Thinking about the service as a whole when you bought your prosthesis, was it:

satisfactory	58	78%	
somewhat satisfactory	9	12%	
somewhat unsatisfactory	4	5%	N=74
unsatisfactory	3	4%	

written comment
•• Salesperson was very patient, understanding and pleasant. She took time to measure, adjust, and re-adjust. She didn't seem to be interested in "pushing her product" as much as she seemed interested in best suiting my needs.

14a. If you checked unsatisfactory or somewhat unsatisfactory, what was the problem?

written comments
•• The fitter was inexperienced.
•• The fitter was not honest with me. She sold two different sizes of prosthesis without telling me. When questioned she said I needed one larger, one smaller. Since then I wonder if she said this because she didn't have any other sizes in stock.
•• I had little knowledge of what was available where. Reach to Recovery information was received two to three weeks after I purchased the prosthesis.
•• The patient, especially in 1965, was given no clue whatsoever as to what to buy. I had no guides.
•• I should have been sold a cheaper one first and told to wear it before being sold another while still emotionally upset.
•• It is extremely important to have mastectomy patients sell prostheses and bras for them. No mastectomy patient would feel otherwise.
•• Salesperson didn't have much to say regarding an item I knew nothing about. Didn't offer much information regarding it.
•• It would have been nice not to have gone to all those places only to find I had to still come up with something myself.
•• While comparison shopping initially, I must say that in some instances the selection was minimal and the assistance received not very helpful. Either the salesperson was not particularly knowledgeable or informed on merits and demerits of various forms, knew little about proper fit or showed little interest in insuring proper fit. Also some of the department stores do not have fitters.
•• People fitting prosthesis should be given information about breast amputees and show some understanding of the amputee's feelings. She should be articluate and should voluntarily provide you with an assortment of prostheses and bras to try. There are many problems--emotions, finances, and comfort involved in a woman's being fitted with prostheses and the "fitter" must be aware of these factors if the amputee isn't to find the experience a miserable, traumatic one.

I think it's terribly important for you to understand how important the prosthesis is to the mastectomy patient. My first conscious thought after the mastectomy was not about the type of cancer I had, how pervasive it was, my life expectancy, what kind of treatment I might require, etc., but about how I was going to look and how soon I'd be able to wear a prosthesis. It was only when the "Reach to Recovery" representative called that I obtained my first real assurance.

There must be some humane, style-conscious, compassionate and understanding person who can construct a more satisfactory, less costly type of prosthesis which one can put on easily and wear with comfort and assurance.
•• I don't think salespeople should insist on any special bra or prosthesis--this should be left to the customer.
•• I think the basic problem was that I'd recently been shook up pretty good, was still in pain, and didn't even know what the forms were supposed to look like let alone know whether I was receiving good service or not in terms of

the fitting. The only reason I knew I did not get good service was because I was effectively put in the position of having to purchase the product. I saw what happened and was a little sick that the fitter would take such advantage. I thought it was ludicrous, but I just wanted to be out of there. [The salesperson altered a bra she was considering before she had agreed to purchase it and then made her feel that she was obligated to buy it.] I knew what was going on but I was physically too exhausted and emotionally sick about it so I didn't argue. I suppose it was my fault and I should not have allowed myself to be taken (I ordinarily am not so meek) but that was simply not a time in my life when I felt very aggressive.

14b. If you checked satisfactory or somewhat satisfactory, how could the service have been better?

written comments

** could have been shown different styles; should have been sold a cheaper one.

** service person was not very helpful; saleslady was rushed; took three months to receive extra bras ordered.

** saleslady was rather cold in the beginning.

** the decision was left to me. I don't know how it could have been better.

** In the department store, I think if the word "commission" was left out of the conversation it would help a great deal.

Senator STAFFORD. The Chair will next invite Mr. Richard J. Dowling and Mr. Martin Shulman. On behalf of the Subcommittee for the Handicapped gentlemen, I welcome you here.

For the record, Mr. Dowling is the director of the Governmental Affairs Department of the American Speech & Hearing Association in Washington.

Dr. Martin Shulman is the president of the New Jersey Speech & Hearing Association.

We invite you on behalf of the subcommittee to proceed in whichever order you prefer. If you care to summarize your statements, we will place them in the record without objection, in full; or you can deliver them; it is up to you.

STATEMENT OF RICHARD J. DOWLING, DIRECTOR, AMERICAN SPEECH & HEARING ASSOCIATION, ACCOMPANIED BY MARTIN D. SHULMAN, PRESIDENT, NEW JERSEY SPEECH & HEARING ASSOCIATION

Mr. DOWLING. Thank you very much, sir. We ask that our full statement be entered into the record. I will summarize it, if I may, or at least the last three parts of it. The statement contains four parts, the last of which offers several of the technological advantages which communicatively handicapped people need; and which also congratulates this subcommittee for its planned early action on the extension of the Education of the Handicapped Act. We think that such an extension will supply the support required for further technological development and the delivery of new and existing technology.

The other parts of our statement, Senator Stafford, concern the technology most usually associated with the communicatively handicapped—the hearing aid. Dr. Shulman's comments relate to the first part of our prepared statement, a pending Federal action having to do with hearing aids, which we believe will have a most untoward effect on hearing-handicapped Americans.

Mr. SHULMAN. On December 15, 1976, the New Jersey Appellate Division upheld far-ranging consumer-protective regulations on hearing aid sales made in the State. Rejecting a challenge from the State hearing aid dealers' association, the court held that recently adopted State rules and regulations governing the business and ethical practices of hearing aid dealers were within the intended scope of the consumer protection law which, in 1973, created the State's hearing aid dispensers examining committee. The decision, *New Jersey Guild of Hearing Aid Dispensers* v. *Virginia Long, Director of the Division of Consumer Affairs*, lifted an earlier imposed stay of the examining committee's regulations, thus putting into effect rules adopted in July of 1976 after extensive public hearings.

The three-judge court unanimously rejected every dealer-raised objection. The examining committee had not exceeded its authority, the court found, in regulating various business and ethical aspects of hearing aid sales. Specifically upheld were rules requiring itemized charges, posted retail prices, prior consumer consent to home visits by dealers, and direct dealer supervision of temporary licensees who deal directly with the public. Additional significant State rules upheld by the decision establish a presumption of "overreaching and fraud" against a dealer who sells an aid at a retail price more than three times the wholesale cost, and require that dealers utilize proper soundproof or sound-treated testing facilities for the conduct of hearing tests.

The hearing-handicapped and hearing-health-professional communities were greatly pleased by the Appellate Division's ruling; they had worked long and hard for the development of the hearing aid rules and regulations and were pleased that an industry whose consumer-abusive practices had long gone unregulated was finally subject to public scrutiny and the force of consumer protection laws.

Now, however, New Jersey's initiative is threatened—not by hearing aid dealers, but by the Federal Government, through the incredible ineptitude of the U.S. Food and Drug Administration. New Jersey will not suffer the effects of FDA's bungling alone; exemplary consumer-protection hearing aid standards in at least four other States—Kentucky, Minnesota, New York, and Vermont—will be nullified if FDA persists in a terribly misadministered regulatory proceeding. It has even been suggested that commendable hearing aid standards established by State-run, federally funded medicaid, vocational rehabilitation, special education, and crippled children's programs will be swept away by the imminent FDA promulgation.

In what then seemed an emphatic and reasonable response to severe criticism of the Nation's hearing aid delivery system by such organizations as the American Speech & Hearing Association and Ralph Nader's retired professional group, former DHEW Secretary Caspar Weinberger, in March 1974, ordered the creation of an intradepartmental task force on hearing aids. The task force was charged with examining "the issues involved in the manufacture, sale, and use of hearing aids"; determining "an appropriate department role", and recommending "a feasible course of action." The task force's management was entrusted to the FDA. Its report and recommendations were due in 90 days.

Six months later, the task force produced a report that was genuinely responsive to the special economic and health needs of hearing-impaired Americans and generally applauded by consumer organizations and health profession groups. But the report met with substantial opposition from hearing aid manufacturers and salesmen, whereupon the task force labeled its product "preliminary report" and went back to its drawing board. It emerged a month later with an amended version, called a "supplementary report," which effectively emasculated the more impressive of the earlier report's recommendations and, in effect, apologized to the hearing aid industry for the "indictment"-like tone of the earlier document.

This second report prompted expressions of dismay from consumer and professional organizations, which, in turn, prompted even further task force deliberations—extensive deliberations, apparently, for they lasted another 11 months.

The task force was determined to please all sides. But when, finally, its "final" final report was made public, only the hearing aid industry was smiling. Among other things, the FDA-managed task force recommended that Federal health dollars be spent to train profit-motivated hearing aid dealers. That is like suggesting that the Environmental Protection Agency, in the interest of a cleaner environment, fund the schooling of vacuum cleaner salesmen. The American Speech and Hearing Association was not alone in suggesting that the task force had "misadministered its proceedings, misperceived its role, and fatally limited its inquiry to the ultimate detriment of its final product."

ASHA urged then DHEW Secretary David F. Mathews not to permit implementation of the task force's recommendations. Dr. Mathews never responded, but FDA did. The Secretary had ordered implementation and FDA was to fill the order. The task force was disbanded; FDA had only begun to fight.

Prior to the May 28, 1976 enactment of the Medical Devices Act—Public Law 94-295—FDA possessed no clear statutory authority to regulate the manufacture or sale of hearing aids, or other so-called medical devices. Former FDA Commissioner Alexander Schmidt acknowledged as much in testimony before the Subcommittee on Small Business. Yet, on April 21, 1976, 37 days earlier, before its receipt of explicit statutory authority to do so, FDA initiated a public proceeding to regulate hearing aid labeling and conditions for sale.

FDA's proposed regulation was said to be based on the findings of the DHEW task force, but the agency was curiously selective in the recommendations it chose to incorporate in its proposal. For example, the task force had recommended a minimal level of health professional involvement in hearing aid sales made to some potential hearing aid users, but a significantly higher standard of professional care for the great majority of potential users, for example, children, the elderly, the institutionalized and individuals who, besides having a hearing problem also suffer from speech or language handicap.

FDA chose only to include the lower standard in its proposed regulation, saying merely that prior to any hearing aid sale, a prospective purchaser should present to the seller a statement written by a physician no more than 6 months before the sale, certifying that there are no medical reasons why the prospective purchaser should not be fitted with a hearing aid. We hasten to note here that medical reasons for not wearing a hearing aid are extremely rare. Under the FDA's proposal, the need for the physician's assurance that a hearing aid is not contraindicated could be waived by consumers 18 years of age and older. No doubt the Nation's hearing aid dealers are already adding a waiver statement to their sales slips.

The higher standard of care envisioned by the task force but not adopted by FDA begins after a physician has determined that an individual's hearing loss is not medically or surgically correctible and that there are no medical reasons why the individual should not wear a hearing aid. It consists of a hearing evaluation, a hearing aid examination—and, where appropriate, recommendation—and aural rehabilitation. Many thousands of hearing aids are sold each year to people who cannot benefit from amplification; many thousands of inappropriate hearings aids are sold to people who could benefit from appropriate amplification. This special level of care prevents the sale of unnecessary and inappropriate aids. But FDA rejected the higher standard.

Fortunately for the hearing-impaired consumer, a number of States have enacted laws and promulgated regulations affecting all hearing aid sales, which call for appreciably higher standards than the ones proposed by FDA. And virtually all State-administered, federally-funded health and education programs which provide hearing aids to their beneficiaries insist on higher standards.

In its response to ASHA's letter urging Secretary Mathews to shelve the report of the DHEW task force, FDA offered the assurance that since these higher State standards "are established to maintain high quality hearing health services and to assure the proper use of public funds," the standards would "not be affected by the findings or recommendation of the task force." The April 21, 1976, publication of FDA's proposed regulation appeared to affirm the Agency's earlier assurance: "State and local governments may impose more stringent conditions for sale of hearing aids than are prescribed in this section."

The May 28, 1976, enactment of Public Law 94–295 nullified FDA's assurance, however, by mandating the abrogation of State medical device standards which differ in any respect from Federal standards. If a State desires to maintain its own standards regarding a given device or to establish a standard in any way different from the Federal standard, it must undertake an elaborate application and public hearing process designed to convince FDA that the State's needs are either higher or somehow unique. We are informed that the Agency intends to promulgate regulations governing FDA preemption of State medical device standards, but that it will be some considerable time before such regulations are proposed, let alone finalized.

FDA seems not to have recognized the impact of Public Law 94–295 on its proposed hearing aid regulation. It neither informed interested parties of the significant change which the act made in the proposed regulation and on which they would have wanted to comment, nor did it give notice to previously disinterested parties—such as State program directors—lulled into not commenting by the FDA's own assurance that the rule would not affect their programs. For those blessed few who were able to discern for themselves the retroactive effect of the Act on the regulation, the FDA did not even extend the period for comments. The period for public comment ended June 21, 1976.

ASHA has petitioned FDA to invalidate its hearing aid proceeding, arguing that FDA was without specific authority to develop and publish on April 21, 1976, a proposed regulation affecting the sale of hearing aids, and that a critical provision of FDA's proposed regulation was nullified by the subsequent enactment of Public Law 94–295, and the interests of the public thereby detrimentally affected, without notice.

We have also urged that any future hearing aid initiatives on FDA's part should await the promulgation of a final FDA regulation on the preemption of State medical device standards. For clearly, the due process rights of parties interested in the regulation of hearing aids cannot now be served by a simple extension or reopening of the period for public comment on the Agency's proposal. Only after final promulgation of a preemption standard will the public and State and local governments fully comprehend the impact of any hearing aid proposal and their rights and responsibilities with respect thereto. Only then will full and fair comment on a proposed hearing aid regulation be possible. Yet, despite our petition, FDA's Bureau of Medical Devices and Diagnostic Products informs us that it is determined to publish the proposed regulation in final form in the very near future.

We realize that the Subcommittee on the Handicapped is without jurisdiction in matters concerning FDA. But the subcommittee does have jurisdiction over Federal assistance to State programs whose high standards may be affected by FDA's altogether untoward effort. And, jurisdiction aside, we know how committed the subcommittee is to advancing the interests of the handicapped, meeting their special needs, and defending their hard-won rights. We believe that the subcommittee would want us to ask its help in this effort to serve hearing-handicapped Americans. The U.S. Food and Drug Administration is determined to put the economic interests of the hearing aid industry before the health interests of the hearing impaired.

We earnestly hope that the subcommittee will urge FDA to rearrange its priorities and insist that, where the interests of handicapped Americans are concerned, misadministration cannot and will not be tolerated. Thank you.

Senator STAFFORD. Do you wish to summarize further, Mr. Dowling?

Mr. DOWLING. Yes, sir. As I indicated earlier, our statement is in four parts, and I very briefly summarized the last three; and Dr. Shulman read the first part, about which we have the greatest immediate concern, having to do with hearing aids and the Food and Drug Administration. So, our presentation is ended, unless you have some questions.

Senator RANDOLPH. Well, my response to the two witnesses, Mr. Dowling and Mr. Shulman, would be that you are really talking to us about the result of court cases; is that correct, in essence?

Mr. DOWLING. We introduced our remarks by talking about a court case in New Jersey which had a very commendable result for the hearing impaired in New Jersey. Then we addressed ourselves to the activities undertaken by the Food and Drug Administration under, ostensibly, the Medical Devices Act of 1976, which would not only undo the result of that court case, but would undo the effects of consumer protection laws applying to all hearing aid sales in at least five States, including New York, New Jersey, and Vermont. It would apparently also undo the very commendable, high, consumer-protective hearing aid standards of medicaid programs, vocational rehabilitation programs, crippled children's programs, and some special education programs in all the States. That is the substance of the testimony you missed.

Senator RANDOLPH. I had to be out of the room.

Mr. DOWLING. I understand.

Senator RANDOLPH. I had not had an opportunity to read your statement. You and Mr. Shulman will have the careful attention of both Senator Stafford and myself, and the staff. We will go into the matter of the New Jersey case, the mandate we had there: and then that being dissipated by a Federal regulatory agency; is that right?

Mr. DOWLING. Yes, sir.

Senator STAFFORD. Mr. Chairman, without being too serious I might say that Mr. Dowling summarized his part of the statement so briefly, and we are not accustomed to that here. I was sure he wanted to say more, and Mr. Shulman too.

I would ask just one question generally, and that is, just how big is the hearing aid industry in our country?

Mr. Dowling. Approximately 600,000 aids are sold every year, Senator, at retail. The retail price is somewhere between $400 and $425 per hearing aid; the wholesale cost is somewhere between $100 and $125.

Senator Stafford. Could you indicate very briefly who the principal manufacturers of hearing aids are in this country?

Mr. Dowling. Yes, sir. Maico Hearing Instruments and Dahlberg Electronics, both of Minneapolis, Minn., and Beltone Electronics Corp. of Chicago. There about 10 major manufacturers and I do not want to give credit where credit is not due. I am not sure who comes next but those are three of the major ones.

Senator Stafford. At your earliest convenience, would you be willing to give the committee in writing the 10 or 12 largest ones?

Mr. Dowling. Yes, sir.

[The material requested follows:]

AMERICAN SPEECH AND HEARING ASSOCIATION
9030 OLD GEORGETOWN ROAD
WASHINGTON, D.C. 20014
(301) 530-3400

February 22, 1977

Honorable Jennings Randolph
Chairman
Senate Subcommittee on the Handicapped
10-B Russell Senate Office Building
Washington, D. C. 20510

Dear Senator Randolph:

During the course of my appearance before the Subcommittee on February 8, Senator Stafford requested that I supply the Committee with a written listing of "the ten or twelve largest ... manufacturers of hearing aids in this country."

Herewith is a listing of the names, addresses, and principal officers of the domestic manufacturers of hearing aids, as contained in the Hearing Aid Journal's "1977 World Buyers Guide and Directory" (November 1976).

1. Acousticon Systems Corporation
   Acousticon Way
   Danbury, Connecticut 06810
   (Murry Kleiman, President)

2. Acou-Tron Hearing Aids, Inc.
   390 Mamaroneck Avenue
   White Plains, New York 10605
   (Ralph P. Messina, President)

3. Adcomold, Inc.
   1558 California Street
   Denver, Colorado 80202
   (James C. Warren, President)

4. Applied Technology
   Division of Itek Corporation
   645 Almanor Avenue
   Sunnyvale, California 94086
   (George W. Deskin, President)

5. Atomic Hearing Aid
   115 Gulfstream Road
   Palm Beach, Florida 33480
   (A.G. Carlson, Owner)

6. Audio Business Systems, Inc.
336 South High Street
Columbus, Ohio 43215
(Mark Zimmerman, Von Zimmerman, Partners)

7. Audio-Medical Electronics Company
6041 N. St. Louis Avenue
Chicago, Illinois 60659
(Charles M. Shutman, President)

8. Audiophone Electronics Co.
2671 Arbor Drive
Pittsburgh, Pennsylvania 15220
(Arthur J. Bart, President)

9. Audiotone
2422 West Holly
Phoenix, Arizona 85009
(Earl G. Peterson, President)

10. Audium Corp. of America
Audivox
Division of U.S. Surgical Corp.
55 Chapel Street
Newton, Massachusetts 02158
(Rolf Stutz, President)

11. Aurex Corporation
844 W. Adams Street
Chicago, Illinois 60607
(E.E. Huth, President)

12. Auros Electronic Corporation
811 N. 27th Street
Milwaukee, Wisconsin 53208
(Charles W. Strzalkowski, President)

13. Beltone Electronics Corp.
4201 W. Victoria Street
Chicago, Illinois 60646
(S.F. Posen, Chairman of the Board)

14. C.M. Clark Company
1 Pocono Drive
Pittsburgh, Pennsylvania 15220
(Clarence M. Clark, Owner)

15. Dahlberg Electronics, Inc.
7731 Country Club Drive
Minneapolis, Minnesota 55427
(Kenneth H. Dahlberg, Chairman of the Board)

16. Danavox, Inc.
4550 West 77th Street, Suite 321
Minneapolis, Minnesota 55435
(James H. Johnson, President)

17. Dyna-Tone Hearing Corporation
Midway Center
109 Croton Avenue
Ossining, New York 105
(Martin Molloy, President)

18. Electone, Inc.
P. O. Box 910
Winter Park, Florida 32790
(Russell L. Baker, President)

19. Fidelity Electronics, Ltd.
5245 W. Diversey Avenue
Chicago, Illinois 60639
(Sidney Samole, President)

20. Goldentone Instruments Corp.
6600 France Avenue, South
Minneapolis, Minnesota 55435
(John F. Mullally, President)

21. Adolph Gordon Corporation
2014 Crompond Road (Roma Building)
Yorktown Heights, New York 10598
(Adolf Gordon, President)

22. HC Electronics, Inc.
250 Camino Alto
Mill Valley, California 94941
(Donald B. Lethbridge, President)

23. Key-Tone Electronics Company
15 West Street
Danbury, Connecticut 06810
(John J. Scarfi, President)

24. M.W. Kritzik
89-34 164th Street
Jamaica, New York 11432
(M.W. Kritzik, Owner)

25. M & W Electronics, Inc.
330 S. Zang
Dallas, Texas 75208
(John H. Wilson, Jr., President)

26. Magnatone Hearing Aid Company
P. O. Box 964
Casselberry, Florida 32707
(Beverly J. Campbell, President)

27. Maico Hearing Instruments, Inc.
7375 Bush Lake Road
Minneapolis, Minnesota 55435
(Robert Ilfeld, President)

28. Master Craft Hearing Aids
P. O. Box 33129
Minneapolis, Minnesota 55433
(Mike Gott, President and Advertising Manager)

29. MGD Corporation
P. O. Box 16205
Minneapolis, Minnesota 55416
(Q.L. Dodds, President)

30. Micro Sound Products
2704 Glasgow Court
P.O. Box 301, Station A
Richmond, California 94808
(Chester J. Jelonek, General Manager-Owner)

31. Modern Hearing Aids, Inc.
2385 South Kinnickinnic Avenue
Milwaukee, Wisconsin 53207
(Arthur H. Paulmann, President)

32. Monroe Hearing Aid Co.
14 Franklin Street
Rochester, New York 14604
(John T. St. John, President)

33. North American Philips Corp.
205 East 42nd Street, Room 1303
New York, New York 10017
(R.Q. Kress, President, Consumer Products)

34. Nu-Ear Electronics
1020 9th Avenue
San Diego, California 92101
(Matt Burak, President)

35. Qualitone, Inc.
4931 West 35th Street
Minneapolis, Minnesota 55416
(R.T. Burger, President)

36. Radioear Corporation
375 Valley Brook Road
McMurray, Pennsylvania 15317
(T.V. McDonald, President)

37. RCI, Inc.
308 So. Walker (P.O. Box 111)
Wayzata, Minnesota 55391
(Ralph Campagna, President)

38. Shalako International, Inc.
1341 N. Scottsdale Road
Scottsdale, Arizona 85257
(William P. Stearns, President)

39. Sonotone Corporation
Elmsford, New York 10523
(Arthur R. Lorch, President)

40. Sound Finder, Inc.
P.O. Box 68
Mt. Kisco, New York 10549

41. Starkey Laboratories, Inc.
P. O. Box 9457
Minneapolis, Minnesota 55440
(William F. Austin, President)

42. Televox Industries of California, Inc.
6022 W. Pico Boulevard
Los Angeles, California 90035
(Fae Dash, President)

43. Telex Communications, Inc.
9600 Aldrich Avenue South
Minneapolis, Minnesota 55420
(Ansel Kleiman, President)

44. Texas Hearing Instruments, Inc.
2503 S. Shepherd Drive
Houston, Texas 77019
(Robert G. Berry, President)

45. Vanco Industries, Inc.
1955 Sherwood Street
P.O. Box Q
Clearwater, Florida 33518
(Stefan D. Van Schenck, President)

46. Vicon Instrument Company
828 Wooten Road, P.O. Box 1676
Colorado Springs, Colorado 80901
(Chauncey Hewitt, President)

47. Viennatone of America, Inc.
2734 North Laramie Avenue
Chicago, Illinois 60639
(Werner E. Hoefer, Chairman)

48. Wesco Electronics
657 Mission Street, #402A
San Francisco, California 94105
(Roland E. Batista, President)

49. Widex Hearing Aid Co., Inc.
36-14 Eleventh Street
Long Island City, New York 11106
(Henry Meltsner, President)

50. Zenith Hearing Instrument Corporation
6501 W. Grand Avenue
Chicago, Illinois 60635
(Allen F. McKee, General Manager)

I regret that I am unable to rank these domestic manufacturers in terms of volumes of hearing aids produced and sold. That information is available only to the manufacturers themselves and they have demonstrated a curious unwillingness to share it.

At recent Federal Trade Commission hearings on a Proposed Trade Regulation Rule for the Hearing Aid Industry, for example, manufacturers's spokesmen refused to supply annual production or wholesale-sales data. The publication of such information, they said, would endanger their competitive marketplace position. Interestingly, it is the manufacturers' trade association (Hearing Aid Industry Conference, Inc., 1001 Connecticut Avenue, N.W., Washington, D. C. 20036) which tells us that 600,000 hearing aids are sold annually in the United States.

We believe that precise information on the numbers of hearing aids sold annually is essential if government and the hearing-health professions are to respond in an efficient and appropriate manner to the needs of hearing-handicapped Americans. Anything the Subcommittee can do to facilitate the production of this information will be greatly appreciated.

Sincerely,

Richard J Dowling

Richard J. Dowling, Director
Governmental Affairs Department

AMERICAN SPEECH AND HEARING ASSOCIATION
9030 Old Georgetown Rd. Washington D.C. 20014

STATEMENT
OF THE
AMERICAN SPEECH AND HEARING ASSOCIATION
ON
TECHNOLOGY AND THE HANDICAPPED,
PRESENTED TO
THE SUBCOMMITTEE ON THE HANDICAPPED
OF THE
SENATE LABOR AND PUBLIC WELFARE COMMITTEE,
TUESDAY, FEBRUARY 8, 1977

Statement submitted by

Dr. Martin D. Shulman, President
New Jersey Speech and Hearing Association
and
Richard J. Dowling, Director
Governmental Affairs Department
American Speech and Hearing Association

The Association on whose behalf we appear consists of approximately 25,000 master's degree and doctorate-level speech pathologists and audiologists who render clinical rehabilitation services to many of the nation's 20 million plus communicatively handicapped in such settings as schools, hospitals, and community and university clinics. On the Association's behalf, we want to express appreciation for the Subcommittee's interest in the technological needs of the handicapped, and gratitude for the Subcommittee's invitation to participate in these hearings.

The several issues we should like to discuss with the Subcommittee are these:

1. Hearing aids and the U.S. Food and Drug Administration;
2. Hearing aids in the public schools;
3. The continuing need for the discretionary funding authority of the Education of the Handicapped Act;
4. Technological needs of the communicatively handicapped.

I.

HEARING AIDS AND THE U.S. FOOD AND DRUG ADMINISTRATION

On December 15, 1976, the New Jersey Appellate Division upheld far-ranging consumer-protective regulations on hearing aid sales made in the State. Rejecting a challenge from the state hearing aid dealers' association, the Court held that recently adopted state rules and regulations governing the business and ethical practices of hearing aid dealers were within the intended scope of the consumer protection law which, in 1973, created the state's Hearing Aid Dispensers Examining Committee (N.J.S.A. 45:9A-1 *et seq.*). The decision, *New Jersey Guild of Hearing Aid Dispensers* v. *Virginia Long* (Director of the Division of Consumer Affairs), lifted an earlier imposed stay of the Examining Committee's regulations, thus putting into effect rules adopted in July 1976 after extensive public hearings.

The three-judge court unanimously rejected every dealer-raised objection. The Examining Committee had not exceeded its authority, the court found, in regulating various business and ethical aspects of hearing aid sales. Specifically upheld were rules requiring itemized charges, posted retail prices, prior consumer consent to home visits by dealers, and direct dealer supervision of temporary licensees who deal directly with the public. Additional significant state rules upheld by the decision establish a presumption of "overreaching and fraud" against a dealer who sells an aid at a retail price more than three times the wholesale cost, and require that dealers utilize proper sound-proof or sound-treated testing facilities for the conduct of hearing tests.

The hearing handicapped and hearing-health professional communities were greatly pleased by the Appellate Division's ruling; they had worked long and hard for the development of the hearing aid rules and regulations and were pleased that an industry whose consumer-abusive practices had long gone unregulated was finally subject to public scrutiny and the force of consumer-protection law.

Now, however, New Jersey's initiative is threatened -- not by hearing aid dealers, but by the federal government, through the incredible ineptitude of the U.S. Food and Drug Administration (FDA). New Jersey will not suffer the effects of FDA's bungling alone; exemplary consumer-protective hearing aid standards in at least four other states (Kentucky, Minnesota, New York, and Vermont) will be nullified if FDA persists in a terribly misadministered regulatory proceeding. It has even been suggested that commendable hearing aid standards established by state-run, federally-funded Medicaid, Vocational Rehabilitation, special education, and Crippled Children's programs will also be swept away by the imminent FDA promulgation.

In what then seemed an empathic and reasonable response to severe criticism of the nation's hearing aid delivery system by such organizations as the American Speech and Hearing Association and Ralph Nader's Retired Professional Group, former DHEW Secretary Caspar Weinberger, in March of 1974, ordered the creation of an Intradepartmental Task Force on Hearing Aids. The Task Force was charged with (1) examining "the issues involved in the manufacture, sale, and use of hearing aids," (2) determining "an appropriate department role," and (3) recommending "a feasible course of action." The Task Force's management was entrusted to the FDA; its report and recommendations were due in 90 days.

Six months later, the Task Force produced a report that was genuinely responsive to the special economic and health needs of hearing-impaired Americans and generally applauded by consumer organizations and health profession groups. But the report met with substantial opposition from hearing aid manufacturers and salesmen, whereupon the Task Force labeled its product "preliminary report" and went back to its drawing board. It emerged a month later with an amended version, called a "supplementary report," which effectively emasculated the more impressive of the earlier effort's recommendations and, in effect, apologized to the hearing aid industry for the "indictment"-like tone of the earlier document.

This second report prompted expressions of dismay from consumer and professional organizations, which, in turn, prompted even further Task Force deliberations -- extensive deliberations, apparently, for they lasted another 11 months. The Task Force was determined to please all sides. But when, finally, its "final" final report was made public, only the hearing aid industry was smiling. Among other things, the FDA-managed Task Force recommended that federal health dollars be spent to train profit-motivated hearing aid dealers. That's like suggesting that the Environmental Protection Agency, in the interest of a cleaner environment, fund the schooling of vacuum cleaner salesmen! The American Speech and Hearing Association (ASHA) was not alone in suggesting that the Task Force had "misadministered its proceedings, misperceived its role, and fatally limited its inquiry, to the ultimate detriment of its final product." ASHA urged then DHEW Secretary David F. Mathews not to permit implementation of the Task Force's recommendations. Dr. Mathews never responded, but FDA did: The Secretary had ordered implementation and FDA was to fill the order. The Task Force was disbanded: FDA had only begun to fight.

Prior to the May 28, 1976 enactment of the Medical Devices Act (Public Law 94-295), FDA possessed no clear statutory authority to regulate the manufacture or sale of hearings aids or other so-called medical devices. Former FDA Commissioner Alexander Schmidt acknowledged as much in testimony before the Subcommittee on Small Business [Hearings: Problems of the Hearing Aid Industry, 94th Congress, 1st Session (May 20, 1975), p. 109]. Yet on April 21, 1976, 37 days before its receipt of explicit statutory authority to do so, FDA initiated a public proceeding to regulate hearing aid labeling and conditions for sale (41 FR 16756-16758).

FDA's proposed regulation was said to be based on the findings of the DHEW Task Force, but the agency was curiously selective in the recommendations it chose to incorporate in its proposal. For example, the Task Force had recommended a minimal level of health professional involvement in hearing aid sales made to some potential hearing aid users, but a significantly higher standard of professional care for the great majority of potential users -- i.e., children, the elderly, the institutionalized, and hearing-impaired persons who also suffer a speech or language handicap. FDA chose only to include the lower standard in its proposed regulation, saying merely that prior to any hearing aid sale, a prospective purchaser should present to the seller a statement written by a physician no more than six months before the sale, certifying that there are no medical reasons why the prospective purchaser should not be fitted with a hearing aid. We hasten to note here that medical reasons for not wearing a hearing aid are extremely rare. Under the FDA's proposal, the need for the physician's assurance that a hearing aid is not contraindicated could be waived by consumers 18 years of age and older. No doubt the nation's hearing aid dealers are already adding a waiver statement to their sales slips.

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Fortunately for the hearing-impaired consumer, a number of states have enacted laws and promulgated regulations affecting all hearing aid sales, which call for appreciably higher standards than the one proposed by FDA. And virtually all state-administered, federally-funded health and education programs which provide hearing aids to their beneficiaries (i.e., state Medicaid, Vocational Rehabilitation, special education, and Crippled Children's programs) insist on higher standards.

In its response to ASHA's letter urging Secretary Mathews to shelve the report of the DHEW Task Force, FDA offered the assurance that since these higher state standards "are established to maintain high quality hearing health services and to assure the proper use of public funds," the standards would "not be affected by the findings or recommendations of the Task

Force." The April 21, 1976 publication of FDA's proposed regulation appeared to affirm the agency's earlier assurance: "State and local governments may impose more stringent conditions for sale of hearing aids than are prescribed in ... this section" (41 FR 16763).

The May 28, 1976 enactment of P.L. 95-295 nullified FDA's assurance, however, by mandating the abrogation of state medical device standards which differ in any respect from federal standards. If a state desires to maintain its own standards regarding a given device or to establish a standard in any way different from the federal standard, it must undertake an elaborate application and public hearing process designed to convince FDA that the state's needs are either higher or somehow unique. We are informed that the agency intends to promulgate reglations governing FDA preemption of state medical device standards, but that it will be some considerable time before such regulations are proposed, let alone finalized.

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We realize that the Subcommittee on the Handicapped is without jurisdiction in matters concerning FDA. But the Subcommittee does have jurisdiction over federal assistance to state programs whose high standards may be affected by FDA's altogether untoward effort. And, jurisdiction aside, we know how committed the Subcommittee is to advancing the interests of the handicapped, meeting their special needs, and defending their hard-won rights. We believe that the Subcommittee would want us to ask its help in this effort to serve hearing-handicapped Americans. The U.S. Food and Drug Administration is determined to put the economic interests of the hearing aid industry before the health interests of the hearing impaired. We earnestly hope that the Subcommittee will urge FDA to rearrange its priorities and insist that, where the interests of handicapped Americans are concerned, misadministration cannot and will not be tolerated.

II.

HEARING AIDS IN THE PUBLIC SCHOOLS

Some school districts in various parts of the country, but only a few, provide hearing aids at no cost to deaf and hard-of-hearing children enrolled in their programs. Some children who require hearing aids, if they are to receive an appropriate education, acquire their aids, at no cost, through state-administered Medicaid and Maternal and Child Health and Crippled Children's programs (Titles XIX and V, respectively, of the Social Security Act). Only 29 state Medicaid programs provide hearing aids, however, and only to handicapped dependent children of families whose income and resources are insufficient to meet the cost of necessary health care. All state Crippled Children's programs provide hearing aids, but the focus here is limited to handicapped children residing in rural areas and areas suffering from severe economic distress. And so, in the great majority of instances, hearing aids utilized by children in the schools and essential to the realization of a full and appropriate educational opportunity are purchased privately, by parents.

In our opinion and, we think, clearly, the landmark statute whose concepts originated in this Subcommittee authorizes local and intermediate school districts to purchase hearing aids for deaf and hard-of-hearing children whose educational needs make amplification requisite. Section 614(a)(5) of the Education for All Handicapped Children Act (Public Law 94-142) requires the establishment and maintenance of "an individualized education program for each handicapped child." Where such a plan indicates that a hearing aid is essential to a child's receipt of an appropriate education, the hearing aid must be provided [section 4(a)(4)].

Yet despite the clear implication of the statute in this regard, some state and local special education officials balk at the prospect of using P.L. 94-142 dollars for the purchase, maintenance, and professional management of hearing aids. A number of these officials argue that hearing aids used to facilitate educational services are already provided at public expense through Title V and Title XIX programs, and that education agencies should not be required to undertake a cost burden already willingly and appropriately shouldered by other state agencies. We hope we have made clear that Titles V and XIX help meet the amplification needs of only a small percentage of the deaf and hard-of-hearing children for whom hearing aids are essential if the realization of an appropriate public education is to be achieved.

Other education officials offer that their responsiblity to procure hearing aids with public funds attaches only where use of the aids is limited to the school environment. If the aids are also needed outside the classroom -- in the home, for example (and this is the case in the overwhelming majority of instances) -- then the responsibility for assuming the cost of purchase resides elsewhere. We believe that this attitude represents an extremely narrow definition of the educational concept. Once again, if the receipt of an appropriate education depends on a child's use of a hearing aid, the procurement of that hearing aid is the responsibility of the agency responsible for the child's education.

We do not know the extent to which the views of the several state and local education officials reflected here are shared by other education officials. We hope that they are not representative. If at some later time it is demonstrated that these views are widely shared, we hope we may count on the Subcommittee's help in confirming the responsibility imposed by P.L. 94-142.

We believe that the resources of state Medicaid and Crippled Children's agencies should continue to be utilized to their fullest appropriate extent in providing needed help to hearing-hanidcapped children. But we also believe that education agencies must assure (1) that where an appropriate education depends on the use of a hearing aid, the hearing aid will be provided at no cost, and (2) that where the cost burden cannot appropriately be borne by a state Medicaid or Crippled Children's agency, it will be borne by the responsible education agency.

III.

THE CONTINUING NEED FOR THE DISCRETIONARY FUNDING AUTHORITY OF THE EDUCATION OF THE HANDICAPPED ACT

We understand that the Subcommittee intends to focus on the issue of extending the discretionary funding authorities of the Education of the Handicapped Act later this month. We congratulate the Subcommittee for its early action on this important issue. We do not expect to appear as witnesses during the upcoming hearings, but we do anticipate that we shall submit rather extensive written views which we hope will be made part of the record of the proceedings.

We are aware -- as is the Subcommittee, no doubt -- of concerns expressed by some special education professionals that the enactment of P.L. 94-142 has somehow shifted the entire responsibility for all aspects of the education of handicapped children to state and local governments, and that, as a result of this shift, the need for the training, research, and other initiatives of the Education of the Handicapped Act has been substantially diminished.

The reality of P.L. 94-142 is, of course, the opposite of this view -- the need for the discretionary authorities of the Education of the Handicapped Act has never been greater. Take the needs of the hearing-impaired child: Recent state reports indicate that while more than 67,000 hard-of-hearing children and more than 21,000 deaf children are currently enrolled in public education programs, there are only about 500 audiologists working in public school settings who meet U.S. Office of Education endorsed certification standards. Audiologists are the professionals who construct and implement the screening programs which permit early identification and early intervention for the young child whose undetected, untreated mild-to-moderate-to-severe hearing loss will increasingly impair his ability to learn language and, thus, his ability to achieve his educational and social potential. Audiologists are also the professionals who evaluate the extent of hearing loss and who, with regular classroom teachers, teachers of the deaf, and other appropriate professionals, help construct and implement a hearing-impaired child's individualized education program. And they are the professionals who render the aural rehabilitation services required by hearing-handicapped children, including hearing aid evaluation, selection, fitting, and follow-up, speech reading, hearing conservation, speech conservation, and related instructional services.

The provision of these services has been generally unavailable to the public school child in the past. But now, with P.L. 94-142, they are mandatory. Only through the extension of the Part D training authority for the training of needed special education manpower can we begin to address the requirement and genuine need for vastly increased numbers of providers of these services.

IV.

TECHNOLOGICAL NEEDS OF THE COMMUNICATIVELY HANDICAPPED

Extended and, we would hope, expanded funding authority for Education of the Handicapped Act initiatives will also foster technology-delivery developments which will greatly benefit communicatively-handicapped Americans. Some of these needed developments are described below:

A. Studies of the condition of hearing aids worn by children in public school programs have consistently found large numbers of aids malfunctioning; the reason -- currently manufactured aids are simply not capable of withstanding the physical strains likely to be found among young users. Yet the National Aeronautics and Space Administration informs us that space-age technology can produce "child-proof" hearing aids. All that's needed now, apparently, is the provision of the kind of federal leadership, support, and encouragement that will induce hearing aid manufacturers to adopt this technology. Creative utilization of the Part E research authority of the Education of the Handicapped Act can help supply this needed inducement.

B. Part E initiatives can also tell us how many Americans there are who require electronic, sensory-expanding speech aids which will permit "talking" by means of knee pressure, eye blinks, breath force, and hand or finger movement. The Bureau of Education for the Handicapped held a conference with experimental developers of this very special technology late last year. The technology is available for the most part; what the manufacturers need now is help in defining the market for such sensory-expanding devices and in discovering the unique variations of need for them.

C. There are today some 5,000 hearing-impaired users of largely donated, mechanical Western Electric teletype-telephone systems. These systems, as crucial to the hearing impaired in many instances as the telephone is to us, are now available in much more compact, more rapid electronic forms. Ideally, telephone companies could and perhaps should install these systems where needed in much the same way and with the same facility as telephones are installed. Realistically, however, substantial federal technology and market research support and direction will be required if any strides in this area are to be expected.

D. Government also has a primary role in determining the extent of the need for and developing means of providing telephone answering services for the deaf and severely hearing impaired. This invaluable service is currently provided on an extremely limited and almost always voluntary basis.

E. The Federal Communication Commission's unanimous December 8 vote to permit "closed" captioning and, thus, bring the benefits of television to the nation's hearing impaired, creates the need for a government-industry partnership effort to develop, ascertain the need for, and deliver the electronic decoding equipment that will make closed captioning a reality.

These instances of technological developments are but a sampling of the devices and systems needed by communicatively-handicapped Americans. The continuation of advancements of this kind and the delivery of the products of existing and future technological advancements depend, in very large measure, on the continuation, indeed, the expansion of Congress' commitment to such statutory authorities as Part E of the Education of the Handicapped Act. We trust that the Subcommittee on the Handicapped will lead the way toward continuing and appropriately expanding this important commitment.

AMERICAN SPEECH AND HEARING ASSOCIATION
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March 11, 1977

Honorable Jennings Randolph
Chairman
Subcommittee on the Handicapped
10-B Russell Senate
  Office Building
Washington, D. C. 20510

Dear Senator Randolph:

February 8 testimony before your Subcommittee by representatives of the American Speech and Hearing Association principally focused on an effort by the U. S. Food and Drug Administration to regulate the labeling and conditions for sale of hearing aids. But it also touched briefly on our hope that the Congress will extend the discretionary funding authorities of the Education of the Handicapped Act, and requested that we be permitted to submit further views on such an extension before the close of the public record on the Subcommittee's present proceedings. We now ask that you authorize inclusion of the several views contained in this letter in that record.

First and generally, we enthusiastically endorse the proposal you introduced February 11 (S. 725) to extend "the existing act, exclusive of part B -- the State grant program -- through 1982."

Second and more specifically, we concur with the determination made by you and S. 725's co-authors that the circumstances which not long ago required the existence of a National Advisory Committee on Handicapped Children and of a special and separate authorizing authority for programs for children with specific learning disabilities are no longer extant. Both the Advisory Committee and part G of the Act have served their temporary purposes, and served them well. The Committee provided needed leadership and guidance to an infant Bureau of Education for the Handicapped. But today the Bureau is a decade old -- strong, capably lead, and functioning in an Administration genuinely committed to meeting the needs of handicapped children. Part G of the Act was generally intended to focus public attention and government funding initiatives on the special education needs of a population which was sometimes overlooked in the identification of and delivery of appropriate educational services to handicapped children. Part G has served as a necessary and appropriate stepping stone to the inclusion of the phrase "children with specific learning disabilities" in the federal definition of handicapped children. The Education for All Handicapped Children accomplished that ultimate purpose, making the continuation of part G's existence unnecessary.

Third and finally, we ask your and the Subcommittee's consideration of the following two proposed "technical" amendments to the Education of the Handicapped Act:

1. *The deletion of Part A's section 602(15), which defines the term "children with specific learning disabilities."*

This proposed amendment would, we believe, serve the interest of consistency by removing from the Act's "definitions" section the single detailed description of the several handicapping conditions contained in section 602(1), which defines the term "handicapped children." The proposed amendment would also permit the unfettered and uncomplicated fulfillment of that portion of the Education for All Handicapped Children Act which guarantees congressional oversight of the Office of Education's management of specific learning disabilities related issues.

2. *The deletion of the term "speech impaired" from the section 602(1) definition of "handicapped children," and the insertion, in its place, of the term "speech or language impaired."*

This proposed amendment would not have the effect of creating a new and additional category within the "handicapped children" definition. Rather it would provide needed clarification and uniformity in the identification, counting, and reporting of language impaired children. And it will enable us, for the first time, to accurately define the size of the nation's language impaired population, thereby enabling us to tailor relevant special education programs in a way that will appropriately meet this population's educational needs. The children usually envisioned by the term "speech impaired" are those whose speech problems are distinctly speech related (e.g., stuttering, voice disorders). But there are other children who suffer language-based speech impairments, such as impaired articulation resulting from a disorder in the phonological component of language. And there are many more who experience discrete impairments of language, such as disordered syntax. Speech-language pathologists identify these children and the specific nature of their expressive problem, but thereafter experience great difficulty in reporting the children identified. Some steps have been taken which have the effect of recognizing that these language-impaired children exist and clarifying the process for reporting their existence and their numbers; for example:

a. A growing number of state and local education agencies have adopted the reporting category "speech or language impaired" (e.g., Maine, Maryland, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Jersey, Ohio, Oklahoma, Tennessee, Texas, Wisconsin), making it impossible for language impaired children to be reported under the federal "specific learning disability" category. This state action is most appropriate, we feel, inasmuch as these children are identified and treated by speech-language pathologists.

b. The Student/Pupil Accounting publication of the U. S. Office of Education (National Center for Educational Statistics, Handbook V, revised 1974) defines "speech handicapped" and "language handicapped" separately (at p. 51), but goes on to point out that, ostensibly because of the narrowness of the federal "speech impaired" category, "the speech handicapped and the language handicapped often are reported collectively as the speech impaired...in programs of education for the handicapped." The Handbook's definition of "speech pathology services and audiology services" includes (at p. 172) the provision of services to the language impaired.

c. Proposed regulations for the implementation of Public Law 94-142 define the category "speech impaired" so as to include within the category children with language impairments (41 FR 56977). These same proposed regulations (at p. 56978) define "speech pathology" as including the identification of children with speech or language disorders, diagnosis and appraisal of specific speech or language disorders, referral for medical or other professional attention necessary for the habilitation of speech or language disorders, and provision of speech and language habilitation.

To assure the accurate and appropriate identification and reporting of children with language impairments, then, and to assure that the speech and language related category of impairment in section 602(1) of the Education of the Handicapped Act is consistent with state and local categories, P.L. 94-142 regulations, and National Center for Educational Statistics reporting categories, we respectfully request a technical amendment changing the section 602(1) "speech impaired" category to a category identified as "speech or language impaired."

Your interest in our views is greatly appreciated.

Sincerely,

Dick Dowling

Richard J. Dowling, Director
Governmental Affairs Department

Senator STAFFORD. Are there significant numbers of imported hearing aids sold in this country?

Mr. DOWLING. Yes; there are some major manufacturers abroad. I am not sure what percentage of the American market they have. I would not imagine it would be more than 5 to 7 percent. Principally they are in Denmark, in the Netherlands——

Senator STAFFORD. And Germany.

Mr. DOWLING [continuing]. And Germany, that is right.

Senator RANDOLPH. We have not had a chance, naturally, to check with the FDA, but we will want to contact them.

Mr. DOWLING. We certainly hope you will, Senator.

Senator RANDOLPH. In your interest, we want to do that, and in the interest of everyone in the hearing process.

Mr. DOWLING. We have the impression that they made a big mistake, and that rather than admit that mistake, they are going to persevere so as to avoid embarrassment. We are so sure that the effect would be a regrettable one for all people in the country who are using hearing aids, that we are really hopeful something can be done to make them think twice. It is their first shot out of the stall of the Medical Devices Act, and we think it would be unfortunate for them to misuse the act in their first attempt with this new and necessary authority—the act is a most commendable one. To misuse it the first time out of the stall would be regrettable, not only for the hearing handicapped, but for FDA itself. One way of correcting an agency's mistake, the most immediate way, is to limit the power from which the mistake arose. We would not like to see that happen; rather we would like to see the mistake corrected before it becomes serious and affects people.

Senator STAFFORD. Mr. Chairman, we can ask the FDA to come up here and discuss that matter with us.

Senator RANDOLPH. I think, Senator Stafford, that is appropriate and necessary in view of what Mr. Dowling said. I think you were very restrained in what you were saying, the way you handled that; and I appreciate that. You feel deeply about it, of course, and you are really hoping that they will correct the mistake before it gets too far; is that right?

Mr. DOWLING. That is correct, sir.

Senator STAFFORD. Mr. Chairman, one last question for our information. How large is the population in the country, using hearing aids?

Mr. DOWLING. There are between 14.5 and 20 million Americans who have hearing losses which may call for hearing aid utilization. According to industry, only 2.5 million of these actually use amplification. We believe many more people who could benefit from hearing aids would use them if retail prices weren't so incredibly high and the delivery system was more thoroughly regulated. The FDA offers that its effort will produce this kind of needed regulation; we believe that FDA's effort, in fact, will be counterproductive.

Senator STAFFORD. Thank you, very much.

Senator RANDOLPH. Thank you, gentlemen. We will probably be in touch with you through staff on some of the matters. Thank you, very much.

Our last witness, Surinder Dhillon, president of Rehab Group, Inc., Arlington, Va.

We are very happy to welcome you to the witness table. Staff members have enjoyed your contact with our office, and your testimony will be valuable.

Senator STAFFORD. Mr. Chairman, before Mr. Dhillon begins, I notice his name is spelled exactly like that of the former speaker of the lower house in India, Dr. Dhillon, whom I have known over the last 5 years. I wonder if there is any relationship there.

Mr. DHILLON. He is an uncle of mine.

Senator STAFFORD. I am delighted to know that. I may see Dr. Dhillon in April, and I will be able to tell him that I became acquainted with you here.

STATEMENT OF SURINDER DHILLON, PRESIDENT, REHAB GROUP, INC., ACCOMPANIED BY JAMES FAST, VICE PRESIDENT

Mr. DHILLON. I would like to just start with a brief statement about Rehab, and then continue with the testimony here that I have prepared.

Rehab is a private, for profit corporation. We have established as one of our major corporate objectives the providing of employment opportunities for handicapped individuals. We have experienced a rapid rate of growth in the information and social sciences, mainly through the development of a reputation of technical competence, cost-effective management, and timely responsiveness.

My testimony today will not be based on my experience as a handicapped individual, but rather the experience of my corporation in providing employment opportunities to the handicapped. Based on this experience, I will provide the committee with some recommendations that I hope will be helpful to you and others as you consider the development of new, or the expansions of existing, programs.

Rehab is a corporation currently employing almost 200 individuals. Our current sales are expected to reach close to $4 million. We perform services or provide products in the area of information science, research and education, and micrographics. Our corporate plan is to continue to expand our existing base of operation into other geographic areas and other product or service areas. Whenever this occurs, it will be controlled by the ability to employ as many handicapped individuals in as many job opportunities as possible.

While employing the handicapped is a commendable objective, it is not as easily obtained, nor as easily maintained, as many lead you to believe. Rehab has employees in a variety of general and special skill areas, including computer programers, data entry operators, micrographic technicians, research assistants, and project managers. While we have a reputation within the Washington area as being a firm that employs the handicapped, we often find it difficult to fill existing vacancies with qualified handicapped individuals. The basic reason is twofold:

First, the training opportunities for the handicapped are limited. Thus the pool of trained individuals is small.

Second, the training that is given is often not related to the job opportunities.

This means that we as private corporation, involved in the technical sciences, would hire more, if we could just find them. Our solution, as a corporation, was to establish our own nonprofit training institution whose sole function is to identify and train the handicapped. We have explored the possibility of working with existing programs for the training and employing of the handicapped.

We know of only one CETA prime sponsor (L.A.) who has selected the handicapped as a major target group. CETA is one mechanism for training handicapped persons for employment in industry, but this mechanism is underutilized. When we as a corporation submitted an unsolicited proposal for training handicapped persons to CETA, it was welcomed as a unique proposal by a profitmaking corporation to provide training and on-the-job-training services for this population of potential workers. We found this to be somewhat surprising since we were a comparatively new corporation and CETA was a much older program. We are looking forward to participating with several prime sponsors on this training program.

Our experience has clearly indicated to us that industry should be actively involved in the recruitment, employment, and most importantly, training of handicapped persons. We believe that the most logical mechanism for helping to insure the employment of handicapped persons is the vocational rehabilitation program of the State Vocational Rehabilitation Agencies and the Rehabilitation Services Administration. Industry and vocational rehabilitation should plan cooperative efforts, such as providing corporate assistance to vocational rehabilitation programs and their counselors in identifying jobs for the handicapped and recruitment of handicapped job candidates.

The identification and/or training of a handicapped individual and his eventual employment is only one of a myriad of problems faced by a corporation that is seriously interested in employing the handicapped.

I would just preface my statement and get away a little bit from today's discussion. I firmly believe in the technology that we have already developed in this country, and I think that by hiring the handicapped and providing job opportunities for the handicapped, the current technology can be modified and used. That is why my statement is so directed in the employment area.

The handicapped individual's opportunities for employment are directly related to his ability to secure transportation to and from the work environment. The Federal Government should attempt to insure equity in the avilability of barrier-free transportation facilities among the States, and should support the handicapped person or his employer in securing these facilities where needed. It is our understanding that the plan to produce the transbus, a mode of mass transit transportation accessible to handicapped persons and demonstrated in six cities throughout the United States, was recently abandoned by former Secretary of Transportation Coleman. It would be our recommendation that the plans for a totally accessible transbus be reconsidered.

However, we would also propose for your consideration the proposition that the providing of transportation for the handicapped to get to work is separate from the generally available transportation for the handicapped. While many handicapped can be employed as "home bound," particularly as computer programers, editors, abstractors, and so forth, the need to "get to work" should be generally given priority by both private industry and the public systems.

Transportation also implies daily mobility. If a physically disabled person requires a wheelchair as an essential item for independence in mobility, the expense of such essential aids should not be incurred by that individual, but viewed as a societal obligation. This should extend beyond initial purchase by vocational rehabilitation departments to include maintenance for job performance and continued independence.

There has been a great deal of recent publicity concerning accessibility for the handicapped. Our experience has shown that accessibility means more than just being able to get to the door. It involves devices, transportation, economics, recruitment, and so forth. There have been no thorough studies of the complexities involved in making corporations and small businesses accessible to the handicapped employee. This means that no real cost benefit studies have been made with respect to the employment of the handicapped in industry, and employers cannot be expected to have determined the cost versus the benefit of employment of these persons.

There are no data available on the problems encountered by industry as it relates to the providing of insurance to the handicapped employee.

Until data are gathered, the Federal Government should work with insurance carriers in removing all disincentives to employers, particularly for life and health insurance. Accurate data for employers to support recruitment efforts of handicapped applicants is essential. For example, sometimes employers do not actively solicit handicapped job applicants, for they have misperceptions of the costs of providing insurance for handicapped employees. No accurate data are available, but informal surveys indicate that corporations fear additional liability. The insurance industry should conduct studies to develop accurate data. Cooperation between insurance providers and industry should be encouraged so that employers will have accurate information regarding this kind of insurance coverage. There is also some discrepancy between States regarding the characteristics of this insurance coverage that results in unequal employment opportunities among the States. The employment of handicapped people may in certain instances also require the use of specialized devices and aids. Corporations should allocate research and development funds to the development and installation of devices that are appropriate to the job performance requirements for the development of its products or services.

While Rehab believes that it is necessary for certain specialized industries to develop special products for the handicapped, our experience has demonstrated quite clearly that the solution to many man-machine interface problems lies in the development and enforcement of certain logical human factor engineering concepts in the vital design of these devices. Such standardization at the major production level would greatly reduce the cost of so-called "special adoption" costs.

As you can see, we have identified potential handicapped employees, trained them, employed them, transported them, and provided them with necessary assistive aids. It is now the responsibility of the corporations to evaluate the individuals' job performance. Handicapped employees do not want to be treated or evaluated differently, just equally. But, therein lies one of industry's problems.

It is our experience that the solution is not greater technology for better evaluations, not more objective data, but better "job people" placement in the first place.

The concept of "job-people matching" is critical in the employment of handicapped individuals, for it helps insure effective job performance. Goals of industry should certainly be high profit margins, but must also involve providing jobs for people, including handicapped people. Any business manager who is worth his salt can always find a way to increase his profit margin at the expense of his employees, but the development of corporate goals must include contributing to the self-development of employees as human beings.

While a corporation may want to employ the handicapped, certain constraints often make it difficult. For example, requirements regarding the procedures for employment of handicapped individuals in a closed union shop are not clearly understood. All corporations are faced with legal EEOC requirements. In many instances, it is impossible for a qualified handicapped individual to be hired because it would place the corporation in conflict with their approved EEOC plan. There needs to be developed a fair audit plan that permits a corporation a certain degree of latitude when making accommodations for hiring the handicapped. A threat of suit often makes a well-intentioned industry wary of cooperating.

The administrative mechanisms for rehabilitation and employment of handicapped persons are already in place. Cooperative efforts are needed between industry and vocational rehabilitation agencies. We believe and encourage the new administration to accept the challenge required to bring concerned parties together in active planning and programing. This would include encouraging the active involvement of groups such as the National Alliance of Businessmen, the Council of State Administrators of Vocational Rehabilitation, CETA, and other groups. The program needs a thrust from a national viewpoint to serve as a model for local jurisdictions.

The White House Conference on Handicapped Individuals has been generally accepted as the mechanism for securing recommendations in the development of programing and legislation affecting handicapped individuals. However, this mechanism is incomplete, for it ends with the development of recommendations rather than actions to be taken as a result of recommendations. The structure should be revised to insure that recommendations are validated and translated into action steps, and then are acted upon by legislators and program persons.

For example, there is a disparity between legislation affecting the "different" groups of handicapped persons. Blind persons, for example, receive certain tax exemptions that are not available to other handicapped groups. There is little agreement among handicapped groups to effect the nature and structure of programs and services for all handicapped.

As a private corporation, it is often difficult to determine just what would be the most appropriate reimbursement program.

I have tried to focus my testimony on what I consider to be the single most important aspect of being handicapped—finding a job. As an employer, I now try to help as many other handicapped individuals as possible to achieve this objective. However, I have found that the task is not easy. The Department of Labor wants me to hire the handicapped, but if I provide any unusual opportunities to do so, EEOC will take legal action for discrimination. I try to provide as many opportunities as possible, but the vocational rehabilitation agencies cannot find the right type of qualified people. I try to hire qualified individuals, even from out of State, but they cannot find affordable accommodations that are architecturally accessible in which to live. I want to hire a trained and qualified programer, but it costs me, the employer, an additional $1,000 in equipment modifications required to accommodate the paraplegic condition. Congress asks me to hire Vietnam-era disabled veterans, and yet I cannot get CETA to provide the necessary funds to do so because they are tied up in previously committed and often unsuccessful programs.

As a corporation owned by the handicapped and dedicated to their employment, it is difficult and often discouraging to see the lack of cooperation and support we receive from well-intentioned, but misdirected and underfunded special interest groups. Saying we want to hire the handicapped and actually doing it are entirely two different things.

Rehab is doing it and will continue to do so. But I would like to leave you with one thought.

Handicapped people make excellent employees. They work hard, are dedicated and ask nothing but equal treatment. I would hope that if we are to utilize the new technology to aid the handicapped, that this technology be dedicated to the preservation of human dignity and equal employment opportunity first, and to window dressing, press release gadgets second. There are many opportunities that currently exist in our work force for employing handicapped. All we have to do is find enough industries that are committed enough to work hard enough to do it. We at Rehab are doing it.

Thank you.

Senator RANDOLPH. Thank you very much, Mr. Dhillon.

You raised concerns which are yours because you are very close to them, but they are also the concerns of the members of our subcommittee; certainly, they are concerns that I shall address and do what I can to get the right answers.

Now, you have mentioned the White House Conference on the Handicapped.

Mr. DHILLON. Yes, sir.

Senator RANDOLPH. And you indicated that they will be meeting, and then what was done will be forgotten. I assure you, if I can, I will see that does not happen. Now, I want Mrs. Forsythe to explain what we are doing.

Mrs. FORSYTHE. The White House Conference will stay in operation for 120 days following the conference in May. This was designed in order to have time to plan for implementation. The time after the conference will be used by the staff in HEW, and other departments, implement the recommendations. The committee mandated that there be an active staff to implement recommendations determined by the conferees.

Senator RANDOLPH. We hope that the law will be followed, since it is an important part of the law.

Mr. DHILLON. Yes.

Senator Randolph. We will see to it that the White House Conference is not just another meeting. As a result of that meeting we will follow through with the recommendations. I am not interested in another meeting, and you are not. We have an understanding on that. I hope you will not have to come back at a later date and tell me that we were wrong because we are trying to help you.

There are going to be witnesses here later this month from that organization, so we will raise that point.

Mr. Dhillon. Thank you, Mr. Chairman.

Senator Randolph. We thought the bus situation was being taken care of.

Mr. Dhillon. I understand that there has been no progress there.

Mr. Fast. What we are asking is that the new Secretary of Transportation revive it, and it be given a little more support.

Senator Randolph. You will have that, we have Brock Adams and his staff—you will have that. We want to be very positive in this matter.

We wonder what recommendations you might have, further than what you have said, about the cooperation between the State vocational rehabilitation departments and an industry such as your own.

Mr. Dhillon. I think basically, there should be some sort of a committee that is comprised of industry and people from State rehabilitation offices, so that they go over some of the problems. I think a lot of problems have been identified by handicapped individuals. I think a data bank should be set up that has all that information, so that it is accessible when they are looking for job opportunities. We found it has been very hard for us to locate handicapped individuals when we need them.

It is really a very funny problem. Once we find somebody that we want to employ, then you get into the act of the Department of Labor, the Equal Opportunity Office. They are very, very determined that you hire a certain percentage of minorities within a corporation when it reaches a certain size. Sometimes, if we offer somebody a job, we have to withdraw that because we have to comply with the Department's, the requirements of the Equal Opportunity Commission. I think maybe the law should be revised to give a little more preference to the handicapped.

Senator Randolph. We like those recommendations that you have.

Thank you very much. You have been very helpful to us. Again I say that staff members have told me about the privilege they had talking with you, and working with you.

Did you ever hear of a company called Anodyne, in Florida, Miami?

Mr. Dhillon. No, I have not.

Senator Randolph. Their employees, as I understand it, are all handicapped workers. I visited that plant one time many, many years ago. I was told that they had approximately 150 workers, and 98 percent of them were handicapped. We had testimony at one time from the president of that company—that goes back many years. I looked the other day, and I see the stock of that company is selling at $0.70 a share; at one time, I believe, a share was $8 or $9. I hope that is not an indication that they have encountered the type of problem you have described. We know they had good management, and handicapped people's productivity is excellent.

Thank you very much.

Mr. Dhillon. Thank you very much, sir.

Senator Randolph. This completes our list of witnesses. The members of the subcommittee will resume the hearing on February 24 and 25. We will then be working, with the help of our witnesses, on the extension of discretionary programs authorized by the Education of the Handicapped Act.

I am sure that many of you know that the subcommittee has a substantial number of issues that we are going to have to address in the 95th Congress. As I said before, we appreciate the counsel that we have been receiving during these 2 days from those persons who have helped us to understand the problems, and we hope they will continue to work with us in our search for at least partial solutions to the problems. We are attempting to seek new approaches, and we know that the solutions will not come easily. We realize the problems facing the handicapped, and that they are to a great degree more serious than the problems faced by persons who do not have those handicaps.

So, we give you the assurance, as we have earlier, that we will do everything we can to see that these hearings will be productive. We will do the job thoroughly, and hope as soon as possible to have legislation to propose.

At this point I order printed all statements of those who could not attend and other pertinent material submitted for the record.

[The material referred to follows:]

berman and associates
1776 K Street, N.W., Suite 701 • Washington, D.C. 20006 • (202) 223-2596

April 14, 1977

Honorable Jennings Randolph, Chairman
Senate Subcommittee on the Handicapped
Committee on Human Resources
United States Senate
Washington, D.C. 20510

4/15/77

Dear Mr. Chairman:

As you know, an area of particular concern in regard to providing equal access for handicapped individuals is the lack of adequate transportation facilities. At Dutcher Industries we have sought to integrate the concept of equal access for the handicapped into a single, all-purpose paratransit vehicle.

Two experimental production prototypes have been developed through funding by the Urban Mass Transportation Administration and are currently undergoing testing in Arizona. Unfortunately, the UMTA budget request for fiscal year '78 did not provide for continued funding of the paratransit technology program and for the development and testing of an actual production prototype.

In view of the great interest expressed in these vehicles by the Committee on Barrier Free Design of the President's Committee on Employment of the Handicapped, I felt it would be appropriate if we submitted a statement for your hearing record urging the Subcommittee to support the efforts of Senator Bayh and Congressman McFall to adequately fund an all-purpose paratransit vehicle that can readily accept handicapped passengers.

Please include this letter and the attached statement in your printed record.

Thank you for your cooperation.

Sincerely yours,

Jason Berman

Jason S. Berman

Enclosures

STATEMENT OF CORNELIUS DUTCHER

PRESIDENT OF DUTCHER INDUSTRIES, INC.

THE ROLE OF PARATRANSIT IN PROVIDING EQUAL ACCESS FOR THE HANDICAPPED

APRIL 12, 1977

Largely as the result of Congressional initiatives and encouragement, Urban Mass Transportation Administration initially funded a paratransit technology program that was designed to develop an efficient, quiet, non-polluting taxi. Since that beginning in 1973, the paratransit technology program has been broadened into an effort to develop a specially designed, single, all-purpose paratransit vehicle with a novel approach to space utilization. As UMTA has noted, the unique objective of this program is to demonstrate "the feasibility of combining several desirable features in one vehicle, such as a clean and quiet engine, maneuverability in urban traffic, and easy entry and exit for elderly and handicapped, to the point of accommodating a wheelchair passenger and a degree of space utilization not now available in production vehicles."

That is a tall order, Mr. Chairman, but we believe the vehicle Dutcher Industries has built for UMTA will go a long way toward meeting that objective. Our paratransit vehicle and one other research model are presently undergoing independent laboratory testing and evaluation. We are confident, on the basis of preliminary results, that the initial tests will prove successful and that as a result, only minor modifications in design will be required to develop a production prototype. As soon as the testing and evaluation data is available, it will be used to develop a "Low Life Cycle Cost Design Study" that will result in actual production vehicle specifications so as to ensure reliability, maintainability, and affordability.

Unfortunately, that is where the paratransit technology program will abruptly end - unless Congress reaffirms its earlier decision to support paratransit development as a vital link in a coordinated urban mass transit system.

The paratransit concept, as you know, encompasses taxis, jitneys, dial-a-ride, shared use, feeder service for fixed route systems, and specialized services for the elderly and the handicapped. It is estimated, for example, that there are more than 13 million elderly and handicapped people in the United States who have a need for paratransit services but are presently constrained by the lack of an appropriate vehicle - appropriate in terms of its design and its cost.

Mr. Chairman, earlier this year at the request of UMTA, the Transportation Research Board of the National Academy of Sciences conducted a Paratransit Vehicle Conference. The purpose of the Conference was to define the need for paratransit services and, as a result, determine the special design features that would be required for the introduction of a true all-purpose paratransit vehicle.

The Conference produced a unanimous conclusion that not only were paratransit services needed, but that the need would increase dramatically in the next decade. The conferees specifically cited specialized services for the elderly and the handicapped as a main source of ridership.

The Conference also produced a consensus on the need for a single, specially designed paratransit vehicle in two basic size ranges - the 3 to 5 passenger model and the 7 to 8 passenger version. In addition, each model would have a "stretch" version. The smaller vehicle could accommodate 5 to 8 passengers with a stretch design and the larger model could accommodate as many as 15 passengers.

Having agreed on the need for paratransit services and for a vehicle designed to meet that need, The Conference, nevertheless, concluded that the automobile manufacturers were not likely to produce a paratransit vehicle.

First of all, it seems the market isn't large enough to accommodate mass production and without mass production, you can't have mass profits; and without mass profits, you can't have the automobile manufacturers. Second, there apparently is a great reluctance to undertake the type of innovative design work required to produce a single, all-purpose paratransit vehicle. It is a natural reluctance, to be sure, since these same manufacturers now produce vans and by retrofitting a van, you make the dubious claim of having produced a paratransit vehicle.

In the absence of any industry involvement at the R and D stage, the Conference agreed, as Mr. George Pastor, Associate Administrator of UMTA for Research and Development has testified, that "some additional government initiative will be needed. . ." The Conference determined that the "real goal" of the paratransit technology program should be to develop and test in service a fleet of 200 specially designed paratransit vehicles over a period of 18 months to 24 months. To reach that goal, a staged plan was formulated: 1) UMTA would sponsor the design and construction of two prototypes; 2) the winner would then bid on a contract for the production of 200 test vehicles with a firm price for delivery; and 3) a contract would be awarded for the in service testing of the 200 paratransit vehicles.

The next question, naturally, is why should the Federal Government fund the prototype development and evaluation? In the view of the paratransit industry, the answer is simple. Because without government funding, there will be no new paratransit vehicles. That is true enough, Mr. Chairman, but it may not be reason enough. But there is good reason:

- There is a clearly defined social need for paratransit services and both user groups and consumers have expressed a great interest in a true paratransit vehicle. If the Federal Government is serious about its intentions regarding the need to fully integrate the elderly and the handicapped into society, it will support paratransit as one of the ways this can be achieved.

One final word, Mr. Chairman, on the question of federal funding. We believe that it would be possible to structure the Federal Government's continued support for R and D in paratransit technology in such a way as to recoup some, if not all, of its investment. A royalty payment formula, for example, could be included in the program.

It is our hope - shared by the industry and consumer groups alike - that Congress will reaffirm its original judgment on the need for a paratransit vehicle and appropriate the $2 million now required to produce competitive production prototypes.

Senator **Randolph**. Thank you very much.

[Whereupon, at 12:10 p.m., the subcommittee adjourned, subject to the call of the Chair.]

REVIEW OF PROGRAMS FOR THE HANDICAPPED

THURSDAY, FEBRUARY 24, 1977

U.S. SENATE,
SUBCOMMITTEE ON THE HANDICAPPED
OF THE COMMITTEE ON HUMAN RESOURCES,
Washington, D.C.

The subcommittee met, pursuant to call, at 10:15 a.m., in room 4200 Dirksen Senate Office Building, Senator Jennings Randolph (chairman of the subcommittee), presiding.

Present: Senators Randolph, Stafford, Hatch, and Hayakawa.

Senator RANDOLPH. The subcommittee will come to order.

We would like to have the record indicate that in the 95th Congress, the Subcommittee on the Handicapped has new members. We have, of course, Senator Harrison Williams, of New Jersey, who is the chairman of what is now called the Committee on Human Resources under the new committee structure naming process. He is on our subcommittee.

Senator Eagleton, of Missouri, is with us as a member of the subcommittee. I hesitate to say the minority or majority because we never worked in that manner in this subcommittee.

Senator Robert Stafford, of Vermont, is the ranking minority member of the subcommittee, as he has been in the past. We have a new member, Senator Hatch, who comes from Utah.

So we begin our hearings this morning for the first time this 95th Congress with our newly announced membership.

OPENING STATEMENT OF SENATOR RANDOLPH

Today the subcommittee continues its series of overview hearings during this 95th Congress. On this third day of hearings, we will receive testimony from those organizations and persons who are concerned with an extension of discretionary programs authorized by the Education of the Handicapped Act and with other aspects of educational programs for handicapped children.

I think it is vitally important to mention at this point a comment that President Carter made in January in a paper entitled, "My personal Commitment to Education." President Carter stated that included in his comprehensive program of specific and substantive proposals for implementation by the President, the Congress and the States was:

> The expansion of educational rights of the handicapped. Of our 6 million school-age handicapped children, only 3 million are now receiving the attention they need. Yet recent Federal court decisions have guaranteed the handicapped their right to an education. Since such education costs a great deal more than that of nonhandicapped children, increased Federal expenditure in this sphere is necessary.

On Friday, February 11, I introduced Senate bill 725, an extension of parts C, D, E and F of the Education of the Handicapped Act. There are copies available here. As all of you are probably aware, the authorization for the discretionary programs terminates June 30 of this year; the extension I introduced continues these vitally necessary programs. Today we have the privilege of counseling with those persons concerned with educational programs for handicapped children and young adults. Although the subcommittee certainly welcomes comments concerning Senate bill 725, we also wish to emphasize that any bill is subject to change between introduction and passage. We know that there are ways in which by colloquy and statement we can help one another and often a bill as presented is modified as a result of these exchanges. That is something with which I am sure the first witness, Representative James Corman, of California, will agree. We also want to hear from those of you who have other educational concerns.

Now, you who are here this morning are on the firing line, and it is important that we think and work together. It is valuable to Senator Stafford and me that we have this hearing, that we go further into the opportunities that we believe should be provided for handicapped children, and in fact to those who are older.

We are delighted to have others join us. Before introducing them, I will ask Senator Stafford for a statement.

Senator STAFFORD. Thank you very much, Mr. Chairman. I have no prepared statement. I am here to listen primarily, but I am very happy that you are holding these oversight hearings and at the opportunity to join with you in conducting one.

I have joined you also as a coauthor of S. 725, which is essential legislation, and before I yield the microphone I want to welcome Jim Corman, my colleague of House days, who is here in front of us. We look forward very much to your testimony and your help in the hearings that we are holding this morning.

I am also happy to welcome two of my colleagues from the minority side in this nonpartisan subcommittee, Senator Hatch and Senator Hayakawa. Thank you, Mr. Chairman.

Senator RANDOLPH. Thank you, Bob. We welcome these two members not as Republicans, but as welcomed participants in the work of this subcommittee.

I hope it is not improper to say that I am grateful, as I think the members of our subcommittee are, that ABC gives attention to the work of a subcommittee of this type and the subject matter that we have to consider. Frank Reynolds, working with his crew, has been very helpful in providing an opportunity to the public, through television coverage, to more fully understand what is being done here. I make no comparisons for any purpose other than to say that while it is very natural and very important that cameras be pointed on other committee and subcommittee hearings on varied subject matters, it is equally important that these continuing hearings of our subcommittee—where we are trying to do the spadework necessary to help the handicapped children of our country, about 6 million now, and only about half that number actually being given the educational opportunities and provided with the facilities they need--receive attention from the camera also.

I wonder if the members of our subcommittee, other than Bob and I, would like to be heard.

Do you, Senator Hatch?

Senator HATCH. I am very pleased to be with you and very pleased to find that this is a nonpartisan committee. I think it is concerned with very important subjects, and I hope that we can resolve some of the difficulties for the benefit of those who are handicapped.

I intend to work with you and other members of the committee and with the staff. I am sure we can do those things with reference to the handicapped in this society.

I am very pleased to have my distinguished colleague, Senator Hayakawa, here today. He is a great person in the U.S. Senate, and a great friend to me.

Senator HAYAKAWA. Mr. Chairman, thank you.

I want to say that the California State University system at Northridge, where we work on education of the deaf, and San Francisco State, which works on mental retardation, and I worked on education of the blind. I am very familiar with many of the problems of the handicapped because I have a handicapped son myself. So I am deeply concerned with the subject.

Senator RANDOLPH. Thank you.

Senator HAYAKAWA. I am very happy to be working on this committee.

Senator RANDOLPH. Thank you very much.

For the record, the Senator is a member of the Human Resources Committee and is not a member of this subcommittee. We want you to feel that you are an ad hoc member at least, and we are appreciative of your understanding of these problems.

I can't forego the opportunity to mention something, even though out of context. I remember in 1936 when I introduced legislation that gave the blind the opportunity to be entrepreneurs in the marketplace. I remember very well the Assistant Postmaster General who was testifying, just as Mr. Corman and you, Mr. Jones, will testify, before the Labor and Education Committee in the House at that time in 1936.

He said: "Why, it is wonderful to be compassionate with the handicapped; it is very fine to do what you can for them, but you know the handicapped are unable to do these jobs that you are discussing."

Well, today there are 3,780 of them doing these jobs under the vending facilities program, not only in Federal structures, parks, and forests, but they are working at other levels of State and, let's say, local governments, operating these facilities. They have done the job not only in selling articles, you see, but the operation even of cafeterias. They can do so many jobs that many said they couldn't do.

All that I said at the time was, "Let's give them the opportunity. Let's have the challenge and let's see whether they can do it." Last year they averaged almost $9,100 in doing this work. They sold $143 million worth of merchandise last year. And it was said in a hearing in the House that it couldn't be done. So it is worthwhile, I think, that we review these programs.

We come back again and again and we understand the progress that has been made. Those that are handicapped in one way or another come in no sense for handouts from the Federal Government. They come hoping only that there will be an uplifted hand in the Congress and in the Administration that will give them the opportunity to share with others the same work responsibilities within the society of which we are a part.

Representative Corman, you are accompanied by Ray L. Jones, the director of the Center on Deafness, California State University at Northridge. We are delighted to have you present testimony in the manner that you desire.

STATEMENT OF HON. JAMES C. CORMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. CORMAN. Thank you very much.

These hearings are important, and I am sure they will help both Houses of this Congress in attempting to arrive at intelligent decisions. I recognize your busy calendar. I have never succeeded in trying to get one of my former colleagues to admit it is easier to be a Senator than it is a Congressman.

Senator STAFFORD. We are not going to do it either.

Mr. CORMAN. I am saying to my fellow Californian I am pleased he is here because if anyone can tell you about the State University system it is he.

If I may, I might submit a written statement for the record, and not burden you with reading it at this time.

I suggest that everyone who gets public funding, but particularly these university programs, need adequate and consistent funding because they have tremendous pressures on them for utilizing their resources. I can think of no better investment of public funds than in preparing the teachers teaching young people who have great minds that are wasted if they do not get that extra little bit of help.

Again, I sincerely appreciate this subcommittee's activities, and it will be useful to us on the House side.

If I may, I will introduce Prof. Ray L. Jones and also Rod Macdonald. He is a native of Massachusetts. He is both deaf and blind. He lost his sight at age 3 and his hearing at age 10. Rod is a senior computer programmer with the Department of Labor, and is completing his master's degree at California State, Northridge, in the department of administration supervision.

Judy Cronlund is a resident of New Jersey. She was born deaf. She is completing her master's degree at the University of California, Northridge, and she will be here soon.

If the Senators will excuse me, I will go back to the House side and try to prepare some more tax bills to send you.

Again, I thank you so much for these hearings, and for what I know you are going to demand for these programs.

Senator RANDOLPH. We are very grateful for your understanding of these problems, and your statement will be included as a part of the printed record.

[The prepared statement of Mr. Corman follows:]

TESTIMONY OF CONGRESSMAN JAMES C. CORMAN (D-CA)
before
SENATE COMMITTEE ON HUMAN RESOURCES
SUBCOMMITTEE ON THE HANDICAPPED
THE HONORABLE JENNINGS RANDOLPH, CHAIRMAN
February 24, 1977

THE FEDERAL RESPONSIBILITY TO THE POSTSECONDARY EDUCATION OF THE DEAF

Mr. Chairman, it is a great pleasure for me to appear before this Subcommittee in order to testify about the federal commitment to the education of the handicapped. I appreciate the Chairman's kindness in permitting me to be the lead off witness today and hope that my statement will provide a meaningful contribution to the dialogue on this important subject. For purposes of both interest, inclination, and information, I intend to primarily focus my comments on the postsecondary education of the deaf and hearing impaired with some discussion of prevalent attitudes toward the hearing handicapped.

I am here today for several reasons. First, I have a long standing interest in and commitment to the federal government's role in providing educational assistance for the handicapped. Secondly, I have developed over the years an appreciation for the real problems faced by those who suffer a hearing handicap. Deafness is a disorder of communication in much the same sense that blindness is a disorder of mobility. The break-down in communication interacts in all aspects of a deaf individual's existence. Since communication is a learned behavior, there is a firm and definite link between it and education. Thirdly, much of my awareness and conscious raising in this area is directly related to the services being provided in my congressional district. California State University, Northridge's Center on Deafness in the San Fernando Valley of the City of Los Angeles is a facility educating the deaf and hearing impaired. Under the expert direction of Professor Ray Jones, a unique and unconventional educational experience has been provided for hundreds of students who suffer a hearing handicap.

The plight of the hearing impaired is the single most prevalent chronic disability in the United States. More people suffer a hearing defect than have visual impairments, heart disease, or other chronic disabilities. While the federal government has recognized the unique educational needs of the deaf practically since the inception of the Republic, there still exists an attitude of callous disregard on the part of many important segments of our society. The commercial television networks dramatically displayed this attitude when they recently denied a plea by over 100 of my House colleagues to "sign" their live inaugural coverage.

We believed that a significant portion of the population would benefit from an opportunity to closely follow the historical events of January 20, 1977, if a sign language interpreter was included in the telecast. Signed proceedings would have prevented an entire segment of our population from being "blacked-out" from President Carter's inauguration. It would have also legitimized the very real needs of the hearing impaired minority if one of the three commercial networks had broken tradition and provided "signed" coverage. (While The Public Broadcasting Service continues to open up its programming to signing and captioning and indicated it would "sign" live coverage of the inauguration, PBS reaches only 70% of the market and many individuals have old television sets without public broadcasting channels.)

Our proposal, as one could imagine, had considerable support, ranging from The National Association of the Deaf, Gallaudet College to Mrs. Rosalynn Carter. The results of our actions were not encouraging.

All three commercial networks, ABC, CBS, and NBC responded almost uniformly in rejecting the proposals citing three major factors:

a) belief that there is no satisfactory way to "sign" without disconcerting public disruption
b) significant numbers of individuals would not be affected to justify the disruption
c) the Public Broadcasting Services was providing the service.

Only one major network, ABC, displayed a concern for the plight of the hearing impaired by indicating it would publicize the availability of signed coverage on PBS, a half an hour prior to the commencement of inaugural coverage on its channel affiliates.

It is interesting to note that no network cited an economic hardship in providing this much needed public service. The primary objection seemed to be the public disruption factor.

NBC President Herbert Schlosser stated that ". . . NBC feels that it is serving the public interest better by providing to its major audience a coverage of this important event in a manner which does not contain the distraction and impairment of view inherent in superimposition of the sign language interpreter."

Mr. Chairman, it is essential that we set the record straight concerning the numbers of deaf and hearing impaired in this country and also touch on this question of public disruption.

Although the networks generally cite the range of 350,000 to 375,000 as the numbers of hearing impaired individuals in the country, in fact that data is erroneous. The most recent and definitive study on this subject, The Deaf Population of the United States by Jerome D. Schein and Marcus T. Delk, Jr. cites the following statistics:

Prevalence and Prevalence Rates for Hearing Impairments in the Civilian Noninstitutionalized Population, by Degree and Age at Onset: United States, 1971.

Degree	Age at Onset	Number	Rate per 100,000
All hearing impairment	All ages	13,362,842	6,603
Significant bilateral	All ages	6,548,842	3,236
Deafness	All ages	1,767,046	873
	Prevocational[a]	410,522	203
	Prelingual[b]	[illegible]01,626	100

[a] Prior to 19 years of age
[b] Prior to 3 years of age

It is my understanding that the Department of Health, Education and Welfare accepts this data as the most accurate information gathered to date on the topic. The National Association of the Deaf which was partly responsible for the book's publication openly quotes these figures as reasonable estimates of the deaf population. And yet, the commercial networks deny special handicapped coverage to a large portion of the 16% of the population which has a hearing difficulty. Are the networks saying that this is not a significant segment of the population?

If we could convince both the networks and the general public at large of the magnitude of the problem, perhaps we could also dispose of the myth surrounding the "public disruption" roadblock. If we could convince ABC, NBC, and CBS to run a national experiment to determine the magnitude of negative feedback from signed broadcasts, we could learn first hand the public's attitude toward helping an underprivileged minority.

It is estimated that 42 million people watch the network nightly news. If one or more networks would experiment by signing their coverage, we would have a better idea of the discomfort ratio of healthy hearing individuals. If we fail to undertake such an exercise, we are permitting expectations of failure to block the possibilities for success.

As recently as last week, President Carter openly urged the networks to broaden their programming for the deaf. Hopefully, his sensitivity to the issue will cause a re-thinking of policy by network executives.

We can be proud that the federal government has a respectable and responsive record to the needs of this minority.

Our federal commitment goes back more than 100 years to the establishment of Gallaudet College in Washington, D.C. Its purpose then and now is to provide college preparatory, undergraduate and continuing education programs for the deaf and a graduate program in fields related to deafness.

Gallaudet is a federally chartered college providing a unique and necessary specialized education. We owe it continuing support.

In 1965 the Congress responded to the trade needs of the deaf and created The National Technical Institute for the Deaf (NTID). This institution provides residential, coeducational, postsecondary, technical education for young deaf people in order to prepare them for successful employment.

Now, more than ever, NTID is performing a valuable function by giving the hearing handicapped the skills necessary for meaningful work. We must maintain our responsibility there.

These two East coast institutions and the specialized programs under their jurisdictions represent our total permanent funding investment in higher education for the deaf and hearing impaired.

Other postsecondary institutions must compete for funding under section 625 of the Education of the Handicapped Act which is administered by The Bureau of the Education for the Handicapped under the Office of Education within the Department of Health, Education and Welfare. During Fiscal Year 1976 BEH administered a total of 17 federal programs impacting on the handicapped with section 625 funds representing an allocation of $2 million. These funds are designed to make grants to institutions of higher learning including junior and community colleges, vocational and technical institutions, and other appropriate nonprofit educational agencies for the development and operation of specially designed deaf and other handicapped programs. In making these grants special priority is given to:

a) programs serving multistate regions or large population centers;
b) programs adapting existing programs of vocational, technical, postsecondary or adult education to the special needs of handicapped people;
c) programs designed to serve areas where a need for such services is clearly demonstrated.

The Regional Vocational Adult and Postsecondary Programs, or section 625 programs as they are commonly referred to, are a tremendous boost for colleges and technical schools where state funding is not adequate to support specialized handicap services. As with any successful people program, section 625 suffers from overdemand and inadequate resources.

Of the $2 million allocated in FY 1976-77 under this program of 13 grants, only four grants directly and primarily impacted on the deaf. Other grants were awarded within the statutory definition of "handicapped persons" which includes the mentally retarded, speech impaired, visually handicapped, emotionally disturbed, or crippled. The competition for this limited funding is keen. Over one hundred institutions applied for support under section 625 funds and thirteen grants were awarded. This means that chances for federal support are decreasing because demand is on the upswing and the funding level appears to be static. Estimates for FY 1978 allow $2,000,000 for section 625 — the identical allocation made for the previous Fiscal Year. This simply indicates that no adjustment for inflation or expansion of successful programs has been made. While states offer some help in supporting institutions engaged in special handicapped programs, their level of support is predicated on scarce resources which is reflected in the level of their contribution.

California has been supportive of special handicapped programs through its Department of Rehabilitation. One of the very fortunate institutions to receive both state and federal support has been California State University, Northridge Center on Deafness.

Located in the San Fernando Valley in Los Angeles, The Center on Deafness is a part of CSUN with handicapped students taking instruction in the same classroom as normal hearing students. The Center provides an alternative learning experience to the more traditional segregated education technique which is usually employed for the hearing handicapped. Since its creation in 1964, the Center has expanded from two hearing impaired or deaf students to a total of 170. The program is focused towards providing graduate level instruction with special sign language interpreters and tutors available to assist needy students.

The obvious advantage to such an innovative and unconventional program is that it is cost effective. Special building construction has not been necessary because of the adequate facilities made available by the university. It is estimated that CSUN Center on Deafness has kept the cost down to about 1/3 of other specialized educational institutions. And it has had two other practical spin-offs because of its integrated approach.

One of the most obvious ones is that because the hearing impaired and deaf mingle freely with other non-handicapped individuals, the mystery and awkwardness of the situation is diffused. A tremendous give and take naturally develops between those who have no hearing problems and those who do. Both my daughter Mary Anne and my son Chuck attended Cal State Northridge and commented on that fact. They, in turn, learned some sign language and understood first hand the special problems of the hearing handicapped.

A second factor is the help that students can offer relating to job placement. The inter-relationships which develop in the classroom can spill over with students filtering job leads to their fellow students.

I cannot and should not offer an evaluation of the benefits of segregating or integrating the educational process for the hearing handicapped. There is a division of opinion within the education community about the benefits and liabilities of each approach. I do not have the expertise necessary to make a judgment. It does seem clear, however, that the integrated approach is a valuable and tenable way to teach and prepare students for a socialized existence. California State University, Center on Deafness has employed that approach since its inception.

BEH has recognized The Center's innovative methods and has rewarded it with federal support. Other institutions have not been as fortunate.

While the federal government can not alone bear the burden for all handicapped programs, we must expand section 625 funding to accommodate more institutions with specialized programs for the handicapped.

Furthermore, it has become necessary to institute a better funding procedure for section 625. Institutions must be able to plan and program their special services over a projected time frame which normally exceeds the one year funding period. Forward funding is a concept which would deal effectively with this basic problem.

At the present time, institutions receive one year grant approval and must re-apply for additional support on a year by year basis. In order to coordinate services and facilitate planning of these specialized programs which involve students, tutors, teachers, and administrative personnel, it would seem advisable to approve a grant on a one plus one basis. That is, approve the grant for year one with a guaranteed commitment for the second year with appropriate inflationary adjustments.

If instituted, this procedure will not solve the evergrowing problem of scarce federal resources or austerity budgets. It will only meet the problem of better campus planning for the deaf and handicapped.

Only an increase in the dollars available for distribution will reduce the fierce and unfair competition for funding.

But beyond section 625 support we need to restate our federal commitment to the education of the deaf. Cognizant that the relationship between academic preparation and earning potential is strong for the deaf population, we need to do more to safeguard their future.

During this Congress I expect to introduce legislation providing California State University, Northridge with permanent federal budget authority establishing an ongoing federal commitment to that institution. The reasons for this anticipated legislation are many.

1) The number of deaf and hearing impaired individuals

is on the rise.

In their comprehensive study of the deaf population, Schein and Delk have determined that there is a definite upward trend in the projected number of hearing handicapped in this country. The age distribution of the present deaf population means that a heavy strain will be placed on educational and rehabilitation facilities in the present decade and the 1980's as well.

2) California is a natural site for an ongoing federal commitment to the deaf and hearing impaired.
As the most populous state in the union, California also has the greatest number of hearing impaired and deaf individuals in the United States. Schein and Delk maintain that in 1971 California had almost 1.5 million hearing impaired individuals, and approximately 200,000 deaf persons. At present, we have a permanent federal investment in two East coast institutions. A West coast facility would ease the travel hardship for many and provide greater balance in terms of geographic distribution.

3) California State University, Northridge Center on Deafness is a highly acclaimed institution serving a national and international constituency.
Since accepting its first deaf students in 1964,

CSUN has awarded more master's degrees to deaf students than any college or university in America. In addition to the 200 graduate degrees, 47 deaf students have been awarded their bachelor of arts. At CSUN deaf students are enrolled each semester in 400-500 different university classes where they function with the support services of interpreting, notetaking, counseling and tutoring. Last year alone, 170 students were enrolled with origins in thirty-six (36) states and six foreign countries. It is approximated that in a given year, 60% of the deaf students enrolled at CSUN come from states other than California.

4) A permanent federal investment in California State University, Northridge Center on Deafness would reduce the drain on section 625 funds. California State University, Northridge Center on Deafness has been a successful competitor for section 625 support. Its program has been responsive to need and innovative and imaginative in scope. If it receives its own "line item", monies will be available for allocation to other worthy institutions.

My proposal will, of course, increase the level of support provided by the federal government for the postsecondary education of the deaf and hearing impaired. This is a necessary step based on need and numbers of individuals involved.

Mr. Chairman, young deaf adults have the greatest difficulty in obtaining employment in this country. It is necessary for us to do everything possible to improve their chances for finding suitable employment. Education is the key and we need to expand the federal effort in this direction.

I have spoken candidly today on my perception of the problems of postsecondary education for the deaf and have made my recommendations. It will be necessary for this Subcommittee and its House counterpart to evaluate the situation and develop appropriate legislation. I am confident it will act prudently and compassionately keeping in mind the best interests of the deaf community.

Thank you for this opportunity to present my views.

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WILSON RILES
Superintendent of Public Instruction
and Director of Education

STATE OF CALIFORNIA
DEPARTMENT OF EDUCATION
STATE EDUCATION BUILDING, 721 CAPITOL MALL, SACRAMENTO 95814

February 18, 1977

The Honorable James Corman
United States Congress
2252 Rayburn House Office Building
Washington, D.C. 20510

Dear Congressman Corman:

For many years deaf individuals have had only limited postsecondary educational resources available to them. We are currently in an era where a number of new program opportunities have been established.

Almost two decades ago, I noted with pride that the California State University at Northridge became committed to the need to provide a wide range of college-level programs and services for deaf individuals. The university has been steadfast to its commitment since that began. The scope and quality of educational opportunities for deaf individuals at the university has steadily improved since its beginning. They have served hundreds of deaf students in programs ranging from the undergraduate majors to graduate-level programs. It is a credit to higher education that the graduates of this particular program have been able to locate high calibre career placements. A number of deaf students have completed doctoral-level programs and have entered into high level professional fields.

This program deserves the attention and commendation of the policymakers at both state and national levels because of its regional and national impact on improving the quality of life for deaf individuals.

Sincerely,

B. L. Griffing

Barry L. Griffing
Assistant Superintendent
916-445-4036

BLG:jj

IBM

International Business Machines Corporation

1501 California Avenue
Palo Alto, California 94304
415/493 3000

February 18, 1977

The Honorable James C. Corman
2252 Rayburn House Office Bldg.
Washington, D.C. 20510

Dear Sir:

Over the past several years, I have had frequent opportunity to visit the Center on Deafness at the California State University at Northridge and to interact with its director, Dr. Ray Jones, and his staff. My motivations have been both personal and professional. As the parent of a deaf son who will be starting his college program this Fall, I am personally interested in seeing that he has the opportunity to attend a university with the widest possible choice of majors, completely integrated with hearing students, but with a full spectrum of quality support services. CSUN is unequalled in these regards.

The last four of my 23 years with IBM have been devoted to professional work in the area of deafness, particularly concerning the communication, education, and employment problems of deaf people. IBM summer and coop programs, which I have developed for deaf college students have brought me into close contact with the other major post-secondary programs for deaf students around the country. Each one has characteristics that make it particularly suitable for various segments of the deaf student population. But the CSUN philosophy of providing full support services while at the same time maximizing the integration of deaf with hearing students is completely compatible with the growing trend toward mainstreaming of handicapped people, a philosophy which I wholeheartedly endorse.

My main concern is that with limited funding and inflationary pressures CSUN efforts to serve more deaf students from around the country will dilute their excellent programs or force them into turning away capable students who would profit so greatly from these opportunities . I, therefore, want to urge your support for increased federal funding to the Center on Deafness at CSUN. Although located on a state university campus, it is truly a national program. At both graduate and undergraduate levels, deaf students go to CSUN from all over the country because of the advantages they find there. These programs cannot be allowed to falter, and new programs should be built on the strong base that has already been established.

The National Leadership Training Program (NLTP) in the area of the deaf has become nationally and internationally renowned. The direct and indirect impact of this one program has signficantly modified the course of deaf education in this country. Based on this success, I am currently recommending to IBM a joint planning and implementation effort with the Center on Deafness, modeled in part after the NLTP. This will involve increased participation by business and industry and thus further supports the concept of mainstreaming, not only in educational environments but on into the business world.

Dr. Jones has the talents and energies to give vital direction to new CSUN programs while maintaining and strengthening current programs. But this requires adequate funding. Through your support and that of your concerned colleagues, it may be possible for him to share more equitably in the federal resources being devoted to deaf education.

Very truly yours,

Steven L. Jamison

SLJ/cls

The CALIFORNIA ASSOCIATION OF THE DEAF, *Inc.*
Affiliated with the National Association of the Deaf – Founded 1906, Incorporated 1914

A Non Profit Organization Dedicated to the Moral, Social, Economic and Educational Welfare of the Deaf
and the Maintenance of the California Home for Aged Deaf, 529 Las Tunas Drive, Arcadia, California 9100[illegible]

February 17, 1977

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Congressman James C. Corman
2252 Rayburn House Office Building
Washington, D. C. 20510

Dear Congressman Corman:

I am a graduate of California State University at Northridge. I am also deaf. These two statements by themselves may not seem significant, but taken together mean a great deal. It means that deaf people, like myself, may obtain degrees from a state university.

IF. If we have proper support services. If we have the means to gain equal access to education. Without such help, vital help that I had access to, deaf people would find it not only difficult but impossible to complete the required course work satisfactorily.

By satisfactorily, I do not mean just getting passing grades. I mean becoming involved, in participating, in being a part of all that is going on in the classroom, of being able to ask and receive questions and answers. Without proper interpreting help, skilled notetakers, special counseling involved, the deaf student does not achieve. He simply exists.

Deaf people who have been aided by support services at CSUN have graduated and achieved lives of service. They have become administrators, teachers and counselors. Their influence on the lives of young deaf and hearing-impaired children is immeasurable.

As President of the California Association of the Deaf, I have also felt the impact of this influx of higher education on the calibre of leadership upon our members.

We think support services as being necessary to our receiving the highest quality of education. We urge you most emphatically to testify as to this value.

Sincerely,

Lillian Skinner

Lillian Skinner
President, C.A.D.

cc: Dr. Ray L. Jones
    files

THE CALIFORNIA STATE UNIVERSITY AND COLLEGES

BAKERSFIELD · CHICO · DOMINGUEZ HILLS · FRESNO · FULLERTON · HAYWARD · HUMBOLDT · LONG BEACH · LOS ANGELES · NORTHRIDGE
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OFFICE OF THE CHANCELLOR
(213) 590 5708

February 18, 1977

The Honorable James C. Corman
2252 Rayburn House Office Building
Washington, D.C. 20510

Dear Congressman Corman:

I have been informed that you are interested in the attitude of the Chancellor's Office of The California State University and Colleges regarding the Deaf program at California State University, Northridge. We are very proud of the program and greatly appreciate your continuing support.

In 1972 the Trustees of the system responded to legislation within the state which designated the Northridge campus as a "professional center for training deaf persons." Northridge was the logical choice because of its size, diversity of programs, and the excellent support services available to deaf students.

Since this legislative action, we have been pleased to note that Northridge continues to increase the number of deaf students it serves each year. We were also encouraged to see the Bureau of Education for the Handicapped join us in providing support services to the deaf students, who come from 32 different states. We are especially pleased that Northridge has pioneered in serving multihandicapped students, including deaf-blind students.

The academic success of deaf students has been remarkable. We are aware that the deaf students achieve academically at essentially the same rate as hearing students, with six percent of the deaf students on the Dean's list last semester; two deaf-blind students earn straight A's in all of their courses.

The Chancellor's Office strongly supports this program and encourages you to assist us in securing substantially increased funding for 1978. We understand that the program was provided a level of funding in 1977 which has resulted in a reduction of services and fewer deaf students served. Because deaf students come from across the nation to take advantage of this outstanding program, continued Federal support is vital for its continuation.

On behalf of The California State University and Colleges, I would like to thank you for your efforts in seeing that Federal participation continues.

Sincerely,

Alex C. Sherriffs
Vice Chancellor
Academic Affairs

ACS:pfz

cc: Dr. Glenn S. Dumke
Dr. James Cleary

Senator RANDOLPH. Are there any comments before Congressman Corman leaves? Thank you.

I believe then, Mr. Jones, you are in charge from this point on, is that correct?

Mr. JONES. Yes, we would like to hear first from Rod Macdonald who is both blind and deaf and who is completing a master's degree program at California State University, Northridge.

Senator RANDOLPH. Fine.

What about the other panelists, could we get together there? I think it is perhaps best if you do that and when you speak, identify yourself and the position which you hold.

You might identify for the record those that sit at the table with you.

Mr. JONES. Mr. Robert Lauritsen, the director of the program of the St. Paul Technical and Vocational Institute.

Mr. Ron LaFayette, Seattle Community College, program for the deaf.

Roy L. Pierce, program director, program for the deaf, Delgado College, in New Orleans.

STATEMENT OF RODERICK J. MACDONALD, COMPUTER PROGRAMER-ANALYST, DEPARTMENT OF LABOR, WASHINGTON, D.C.

Mr. MACDONALD. In 1962, I enrolled at St. Anselm's College in Manchester, N.H., where I had planned to major in mathematics. Because I could not get math books in braille, I had to change my major. I eventually settled on philosophy because only one book was required for each class and, at my parents' expense, I could usually get it transcribed into braille in time for class. Since I could not hear lectures, I did not attend classes. An interpreter was something I had never heard of at this time. I simply read the books, took the exams, and was happy to be able to pass. I graduated from college with a C-plus grade point average. I was satisfied with this because I felt I had done the best I could under the circumstances.

Although I had a college degree, the only job my rehabilitation counselor could find for me was sorting nails in a Goodwill Industry sheltered workshop. I lasted about 6 weeks, then decided I wanted more out of life than that. I went to a computer programing school, then finally landed my current position with the Department of Labor.

For the past 6 years, I have been employed by the Department of Labor here in Washington, and am now a senior computer programer. I have always had a deep concern for people, and hope to combine this with my aptitude for computer work by specializing in and training other handicapped persons as programers. With this in mind, I sought entrance to graduate school.

I knew of only two schools which might be interested in accepting me as a graduate—Gallaudet College and California State University, Northridge. I applied to both. I was acepted for one course at Gallaudet, but only on the condition that I provide my own interpreter and the required course materials in braille. Since I could not get any of these materials transcribed in time, I had to withdraw from the course.

In January of 1976, I enrolled at CSUN where they offered full support services for me. I have never worked so hard as I did in those 8 months at CSUN. Sometimes I had in excess of 40 hours of lectures in a week, plus up to 8 hours of homework at night. This was difficult because I had to get information through a manual communication method with which I still was not fully expert. Yet I got an "A" in every class, every paper, and every examination. My "C-plus" grade point average as undergraduate became an "A" grade point average as a graduate student. This was made possible because of the support services provided by CSUN. I had two interpreters and a note taker attending each class with me. Notes were later transcribed into braille, as were other required materials. This was my first chance to compete with other students on a near-equal basis, and the elation I felt at this opportunity, the fierce pride I felt in succeeding, are emotions I cannot describe accurately in words.

I have talked with many deaf and deaf-blind students and know their feelings of frustration—even despair—when they know they can succeed, but when the opportunity and support are not provided. It is most probable that we would never have had a Helen Keller if she had not had an Anne Sullivan to provide the support services she needed.

There exists today, more than ever before, a need for adequate funding of the regional educational programs providing this type of support services. Unfortunately, it costs a lot of money to support deaf and deaf-blind students.

Mr. Chairman, with your help and the help of this committee, these services will be provided for us.

Thank you.

[The prepared statement of Mr. Macdonald follows:]

SUBCOMMITTEE ON THE HANDICAPPED

Thursday, February 24, 1977 - 9:30 a.m. Room 4232 Dirksen SOB

Statement of Roderick J. Macdonald, Senior Computer Programmer
Department of Labor, Washington, D. C.

PERSONAL BACKGROUND

Mr. Roderick J. Macdonald, a native of Massachusetts, has been legally blind since age three, and lost his hearing on a progressive basis beginning at the age of ten. He has not been able to hear classroom lectures since he was a sophomore in high school. He is now profoundly deaf. Mr. Macdonald attended several public schools before transferring, at the age of ten, to the Perkins School for the Blind in Watertown, Massachusetts. Currently, Mr. Macdonald is a Senior Computer Programmer at the Department of Labor in Washington, D.C. He has a B.A. Degree from St. Anselm's College in Manchester, New Hampshire, and is completing a Master's Degree at California State University, Northridge.

TESTIMONY

In 1962, I enrolled at St. Anselm's College in Manchester, New Hampshire, where I had planned to major in mathematics. Because I could not get math books in Braille, I had to change my major. I eventually settled on philosophy because only one book was required for each class and, at my parents' expense, I could usually get it transcribed into Braille in time for class. Since I could not hear lectures, I did not attend classes. An interpreter was something I had never heard of at this time. I simply read the books, took the exams, and was happy to be able to pass. I graduated from college with a "C+" grade point average. I was satisfied with this because I felt I had done the best I could under the circumstances.

Although I had a college degree, the only job my rehabilitation counselor could find for me was sorting nails in a Goodwill Industry sheltered workshop. I lasted about six weeks, then decided I wanted more out of life than that. I went to a computer programming school, then finally landed my current position with the Department of Labor.

For the past six years, I have been employed by the Department of Labor here in Washington, and am now a senior computer programmer. I have always had a deep concern for people, and hope to combine this with my aptitude for computer work by specializing in and training other handicapped persons as programmers. With this in mind, I sought entrance to graduate school.

I knew of only two schools which might be interested in accepting me as a graduate....Gallaudet College and California State University, Northridge (CSUN). I applied to both. I was accepted for one course at Gallaudet, but only on the condition that I provide my own interpreter and the required course materials in Braille. Since I could not get any of these materials transcribed in time, I had to withdraw from the course.

In January of 1976, I enrolled at CSUN where they offered full support services for me. I have never worked so hard as I did in those eight months at CSUN. Sometimes I had in excess of 40 hours of lectures in a week, plus up to eight hours of homework at night. This was difficult because I had to get information through a manual communication method with which I still was not fully expert. Yet I got an "A" in every class, every paper, and every examination. My "C+" grade point average as an undergraduate became an "A" grade point average as a graduate student. This was made possible because of the support services provided by CSUN. I had two interpreters and a notetaker attending each class with me. Notes were later transcribed into Braille, as were other required materials. This was my first chance to compete with other students on a near equal basis, and the elation I felt at this opportunity, the fierce pride I felt in succeeding, are emotions I cannot describe accurately in words.

I have talked with many deaf and deaf-blind students and know their feelings of frustration... even despair....when they know they can succeed, but when the opportunity and support are not provided. It is most probable that we would never have had a Helen Keller if she had not had an Anne Sullivan to provide the support services she needed.

There exists today, more than ever before, a need for adequate funding of the regional educational programs providing this type of support services. Unfortunately, it costs a lot of money to support deaf and deaf-blind students.

Mr. Chairman, with your help and the help of this committee, these services will be provided for us.

Senator Randolph. Rod, this is a human document that you have placed in the record, and we are very appreciative of your testimony.

Often I look back—and I may place this in the record—on what Thomas Wolfe said about what America really was. I won't quote his words exactly, but he said America was not for the rich or the poor, not for the black or the white, not for this or that, but America was for the person, for the man or woman who in their own right could achieve.

It was a beautiful story that he wrote, and there are many here that perhaps remember it, but I will put his exact quotation into the record because of what Rod has been telling us. The mind conceives something and then the hand and the heart all work toward the achievement of that which has been earlier conceived.

[The quotation mentioned follows:]

> To every man his chance. To every man, regardless of his birth, his shining, golden opportunity. To every man the right to life, to work, to be himself, and to become whatever his manhood and vision can combine to make. This, seeker, is the promise of America—*You Can't Go Home Again.*

Senator Randolph. Rod, we are very encouraged by what you have said, the contribution that you made today.

Senator Stafford. I feel the same way, Mr. Chairman, and I think Rod is to be congratulated on an outstanding achievement. I think it is an inspiration to this subcommittee to realize what can be done and realize what ought to be done for the handicapped of this Nation. So I am very appreciative of his appearance here this morning. As I say, it will be something to encourage all of us.

Senator Randolph. Thank you very much, Bob.

Do you have any comments, Senator Hayakawa?

Senator Hayakawa. Thank you very much. I enjoyed the testimony.

Senator Randolph. Thank you very much.

Mr. Jones. Let me introduce Judith Cronlund, formerly a teacher at the American School for the Deaf and now married to Phil Cronlund, the superintendent of the Marie H. Katzenbach School for the Deaf at Trenton.

She will give her testimony and her husband will reverse interpret for her.

STATEMENT OF JUDITH CRONLUND, M.A., GRADUATE OF CALIFORNIA STATE UNIVERSITY, NORTHRIDGE, CALIF., IN SPECIAL EDUCATION

Mrs. Cronlund. Please let me introduce myself. My name is Judy Cronlund from Trenton, N.J. I was born deaf, as was my older brother. Most of my life I have lived in the environment known as the deaf world. While I had hearing parents and some hearing friends, I never really had the opportunity to associate with hearing peers until I entered California State University, Northridge—CSUN.

I selected CSUN because it was virtually the only program in the United States to offer me what I needed—a graduate program at a major university where I could learn alongside my hearing peers—and support services of interpreting and notetaking. With support services, I was even able to join the gymnastics team, the first deaf student to do so. I also met my husband, a hearing man, who was also a graduate student at CSUN.

I know that, historically, the educational options for the deaf have been limited and restrictive. Just as Public Law 94-142 opens new educational horizons for all handicapped children, we also need the additional funding that will allow deaf persons the higher educational opportunities that represent a less restrictive environment.

The funding of support services, such as interpreters, note takers, and tutors has enabled many individuals, such as myself, to be introduced on an equal basis with hearing peers in a large university setting. Equally important, it gives us the opportunity to compete for good jobs and to progress professionally.

I ask that you carefully examine the needs of the deaf and ask that the regional programs serving the deaf receive increased funding so that they can provide the support services and education necessary for us to work and compete along with our hearing peers.

Thank you.

Senator RANDOLPH. Thank you very, very much.

I want Mrs. Forsythe, who is staff director of our Subcommittee on the Handicapped, to make a personal comment, and I think it is appropriate.

Mrs. FORSYTHE. Judy was a classmate of my son's at the American School, and I think she is too modest to say she was a swimmer on the World Deaf Olympic Team while she was a student at the American School.

Mrs. CRONLUND. Yes.

[The prepared statement of Mrs. Cronlund follows:]

SUBCOMMITTEE ON THE HANDICAPPED

Thursday, February 24, 1977 - 9:30 a.m. Room 4232 Dirksen SOB

Statement of Judy Cronlund, M.A.,
Graduate of California State University, Northridge
in Special Education

PERSONAL BACKGROUND

Mrs. Judy Cronlund is a congenitally deaf woman. She attended the American School for the Deaf in Connecticut, a residential school, following which she went to Gallaudet College to obtain a Bachelor's Degree. Mrs. Cronlund taught at a residential school for several years, then enrolled at California State University, Northridge (CSUN) where she earned a Master's Degree in Education of the Deaf. She currently resides in Trenton, New Jersey, where her husband is Superintendent of Marie H. Katzenbach School for the Deaf.

TESTIMONY

Please let me introduce myself. My name is Judy Cronlund, from Trenton, New Jersey and I was born deaf, as was my older brother. Most of my life I have lived in the environment known as the "deaf world". While I had hearing parents and some hearing friends, I never really had the opportunity to associate with hearing peers until I entered California State University, Northridge (CSUN). I selected CSUN because it was virtually the only program in the U.S. to offer me what I needed....a graduate program at a major university where I could learn alongside my hearing peers.....and support services of interpreting and notetaking. With support services, I was even able to join the gymnastics team, the first deaf student to do so. I also met my husband, a hearing man, who was also a graduate student at CSUN.

I know that, historically, the educational options for the deaf have been limited and restrictive. Just as Public Law 94-142 opens new educational horizons for all handicapped children, we also need the additional funding that will allow deaf persons the higher educational opportunities that represent a less restrictive environment.

The funding of support services, such as interpreters, notetakers and tutors has enabled many individuals, such as myself, to be included on an equal basis with hearing peers in a large university setting. Equally important, it gives us the opportunity to compete for a good job and to progress professionally.

I ask that you carefully examine the needs of the deaf and ask that the regional programs serving the deaf receive increased funding so that they can provide the support services and education necessary for us to work and compete along with our hearing peers.

Thank you.

Senator RANDOLPH. Is this a wife and husband team?

Mr. JONES. Yes.

Senator RANDOLPH. They work together well.

STATEMENT OF RAY L. JONES, ED.D., DIRECTOR OF THE CENTER ON DEAFNESS, CALIFORNIA STATE UNIVERSITY, NORTHRIDGE, CALIF.

Mr. JONES. Mr. Chairman, since 1964 California State University has been receiving deaf students, primarily at the graduate and undergraduate levels. I would like to share with you six points that we have learned in these 12 years of service to them.

First, we learned that qualified deaf students can successfully function in both undergraduate and graduate university classes when given support services of interpreting, note taking, tutoring and counseling.

On May 27, 54 deaf students will receive degrees at the commencement exercises in Northridge. Twenty-eight will receive bachelor's degrees and an additional 26 will receive master's degrees. In 12 years this will make a total of 77 deaf students who will earn bachelor degrees and 225 deaf students who have successfully completed master's degrees at the university.

In addition, nine of these deaf students have gone on to major universities where they have completed doctoral degrees.

Dr. Richard Kinney, who is both deaf and blind, has said: "Our challenge is to reach the unhandicapped mind behind the handicapped senses."

The minds of handicapped students, such as Judy and Rod, are being reached today through support services.

The second point: Deaf graduates from master's degree programs are competitively employed in fields for which they have trained. Our placement studies indicate that more than 95 percent are currently employed in professional positions. Their average earnings are about $1,500 per month.

A third point: Education in integrated classes gives a new dimension to the educational experience of both hearing and deaf students. Friendship, mutual understanding and respect develops between hearing and deaf classmates and continues into their future employment.

Fourth: Integrating deaf students in university classes requires no major investment in bricks and mortar, yet gives deaf students full and equal access to a multimillion dollar investment in classrooms and equipment and to thousands of university classes. This semester, 170 deaf students are enrolled in more than 450 different classes on our campus.

The fifth point: Integrating deaf students in regular classes at the university is cost-effective—a fraction of the cost of segregated programs. This modest investment of tax dollars is more than repaid in the income taxes deaf graduates are now paying. In fact, we estimate that deaf graduates of CSU pay more than $400,000 annually in Federal taxes. This is more than our Federal grant.

Someone has said: "If you feed a man, he will hunger again. If you clothe him, his clothes will wear out. But if you give him access to a good education, he will take care of himself."

A sixth point: With increased funding for 1978 under section 625 of ESEI, full support services for deaf students at CSUN can be restored. Additional qualified deaf students can be accepted. The momentum of the university's expanding services to deaf students can be resumed. Plans for developing a program to prepare deaf students for new careers in business and industry can be implemented. And the dream of Mary Switzer to bring deaf citizens out of the ghettos and into the mainstream of community life can be realized.

Thank you.

Senator RANDOLPH. Thank you.

We remember Mary, many of us.

Mr. JONES. A great woman.

Senator RANDOLPH. A great woman, and what an inspiration, of course, to others who carried on.

Mr. JONES. She was responsible for getting us started in the field of deafness, Senator, in 1960.

Senator RANDOLPH. It is very interesting material that you give us about what is being done at Northridge.

I am not sure of the financing on this. Where is the money coming from?

Mr. JONES. It comes from three different sources: Partially from the university's State college system, where we have a legal base as a center on deafness for the system at Northridge; and second, a grant from the Department of Rehabilitation, and third, from section 625 funds through the BEH.

About 60 percent of our students come from States outside of California; therefore, it is our position that California can and is doing its fair share to educate its own citizens but it should not be expected to provide for the education of students who come to us from 32 other States in the Nation this semester.

Senator RANDOLPH. Senator Stafford.

Senator STAFFORD. I have no comment at this time. Thank you, Mr. Chairman.

Senator RANDOLPH. Senator Hatch.

Senator HATCH. I am tickled to death to have read and listened to part of your statement today, and I just want to compliment you and your staff and your university for doing the great work that you are doing. I intend to give it all of the support I can as a U.S. Senator. So I am very pleased.

Senator RANDOLPH. Senator Hayakawa, do you have direct information about this program? We would like for you to tell us in your own words what Northridge is doing.

Senator HAYAKAWA. I don't have much direct information about the University of California system; therefore, I would like to ask Professor Jones a question. Besides our program at San Francisco and Northridge, where else in California in the system of higher education has this special work for the handicapped gone on?

Mr. JONES. There are 14 community colleges in California that have special programs serving deaf students. The majority of these are primarily serving California residents and then many of these students transfer to the university after completing two years of junior college.

Senator HAYAKAWA. Is there any more being done at State universities or at the University of California?

Mr. **Jones**. There are occasional students who go into Fullerton or UCLA or USC. We provide a consortium interpretive service for students in the Los Angeles area going to USC or UCLA for doctorates or courses not available at CSUN.

Senator **Hayakawa**. But the basic education is being done at Northridge or San Francisco?

Mr. **Jones**. Yes.

Senator **Hayakawa**. Thank you.

Senator **Randolph**. Thank you very much.

[The prepared statement of Mr. Jones follows:]

SUBCOMMITTEE ON THE HANDICAPPED

Thursday, February 24, 1977 - 9:30 a.m. Room 4232 Dirksen SOB

Statement of Ray L. Jones, Ed.D. Professor of Education
Director of the Center on Deafness
California State University, Northridge

SUMMARY OF TWELVE YEARS OF EXPERIENCE IN SERVING DEAF STUDENTS AT CALIFORNIA STATE UNIVERSITY, NORTHRIDGE (1964-1976)

I. QUALIFIED DEAF STUDENTS CAN SUCCESSFULLY FUNCTION IN BOTH UNDERGRADUATE AND IN GRADUATE UNIVERSITY CLASSES WHEN GIVEN SUPPORT SERVICES OF INTERPRETING, NOTETAKING, TUTORING AND COUNSELING.

Academically deaf students are performing as well as hearing students. Ten deaf students were on the Dean's List for Spring, 1976. Five of these with perfect 4.0 grade point averages. Three of these five were multi-handicapped. (One was deaf-blind; one blind-deaf; one foreign born physically handicapped and deaf.)

Since 1964, fifty deaf students have been awarded bachelor's degrees and 203 deaf students have been awarded master's degrees.

CSUN has awarded more master's degrees to deaf students than any college or university in the world. Nine deaf graduates have gone on to complete doctoral degrees at major universities across the nation.

Dr. Richard Kinney, who is both deaf and blind, has said, "Our challenge is to reach the unhandicapped mind behind the handicapped senses." The minds of deaf and deaf-blind students at CSUN are being reached through the use of support services.

II. DEAF GRADUATES FROM MASTER'S DEGREE PROGRAMS ARE COMPETITIVELY EMPLOYED IN FIELDS FOR WHICH THEY HAVE TRAINED.

Placement studies indicate that more than 95 percent are currently employed in professional positions.

III. EDUCATION IN INTEGRATED CLASSES GIVES A NEW DIMENSION TO THE EDUCATIONAL EXPERIENCE OF BOTH HEARING AND DEAF STUDENTS.

Friendship, mutual understanding and respect develops between hearing and deaf classmates and continue into their future employment.

IV. INTEGRATING DEAF STUDENTS IN UNIVERSITY CLASSES REQUIRES NO MAJOR INVESTMENT IN "BRICKS AND MORTAR", YET GIVES DEAF STUDENTS FULL AND EQUAL ACCESS TO A MULTI-MILLION DOLLAR INVESTMENT IN CLASSROOMS AND EQUIPMENT AND TO THOUSANDS OF UNIVERSITY CLASSES

This semester, 170 deaf students are enrolled in more than 450 different classes.

V. INTEGRATING DEAF STUDENTS IN REGULAR CLASSES AT THE UNIVERSITY IS COST-EFFECTIVE...A FRACTION OF THE COST OF SEGREGATED PROGRAMS.

This modest investment of tax dollars is more than repaid in the income taxes deaf graduates are now paying.

It has been said that:

> "If you feed a man, he will hunger again.
> If you clothe him, his clothes will wear out.
> But if you give him access to good education,
> He will take care of himself."

VI. WITH INCREASED FUNDING FOR 1978 UNDER SECTION 625

Full support services for deaf students at CSUN can be restored.

Additional qualified deaf students can be accepted.

The momentum of the university's expanding services to deaf students can be resumed.

Plans for developing a program to prepare deaf students for new careers in business and industry can be implemented.

SUBCOMMITTEE ON THE HANDICAPPED

Thursday, February 24, 1977 - 9:30 a.m. Room 4232 Dirksen SOB

Background Information on Campus Services for the Deaf, California State University, Northridge (CSUN)

California State University, Northridge (formerly known as San Fernando Valley State College) is located in suburban Los Angeles on a 350-acre campus consisting of 14 major buildings. Today, about 28,000 students (170 of whom are deaf) are enrolled in the eight schools and 50 departments of the university.

A brief profile of the deaf student body follows: they range in age from 16 to 81; they are a profoundly deaf group; 10% of them have a secondary handicap in addition to their deafness (two of these persons are deaf-blind); they come from 32 different states and several foreign countries, and they are enrolled in nearly 500 classes across the university.

The model is unique in that deaf students are fully integrated into regular university classes, as opposed to having segregated classes exclusively for deaf persons. About 70% of these students are upper division (junior and senior), or graduate students with a professional goal, such as teaching, as a career objective. A typical class consists of a regular university professor, an interpreter who translates the spoken word of the instructor into sign language, one or more deaf students, and 20-25 hearing students. Deaf students succeed academically at the same rate as hearing students at CSUN because the support services provided (interpreting, tutoring, notetaking, counseling) enable them to function as "first class citizens" in an integrated university setting where they study and compete alongside their hearing peers.

In addition to interpreting services for the usual lectures, interpreters are also provided for certain university related off-campus activities. For example, a health class in which a deaf student was enrolled, received an assignment to observe the Emergency Room of a busy inner-city hospital from midnight to five a.m. The deaf student's request for an interpreter was met! An interpreter translated the often-rushed words of the doctors and nurses into sign language for the deaf student, who was able to participate fully in this vital learning experience.

The model of support services in an integrated setting has proved to be successful with deaf as well as hard-of-hearing students at both undergraduate and graduate levels. It has also proved to be equally successful in serving deaf-blind students. Support services have enabled 50 deaf students to earn bachelor's degrees, and another 203 to earn master's degrees at CSUN. While most of the master's degrees have been in the areas of education and rehabilitation, there is every reason to believe that the model will be successful in every other undergraduate and graduate curriculum area, but particularly in the field of business.

The university's commitment to deafness goes back to 1960 when, through the efforts of Miss Mary Switzer, Commissioner of the Office of Vocational Rehabilitation, and Mrs. Spencer Tracy, Director of John Tracy Clinic in Los Angeles, a planning grant was awarded to initiate (in 1962) a "Leadership Training Program in the Area of the Deaf." This program was designed to alleviate a shortage of qualified change-agents in the fields of education and rehabilitation. The program now has 69 deaf and 141 hearing graduates who hold distinguished positions of leadership across the nation.

In 1972 the Board of Trustees of the California State University and Colleges system designated CSUN as a professional center for the training of deaf persons, and in the same year, a Center on Deafness was formed at CSUN. The Center on Deafness has two objectives: (1) to train professional persons to work with the deaf, and (2) to provide supportive services (interpreting, notetaking, tutoring, counseling) to deaf students at the undergraduate and graduate levels so they may pursue their studies successfully in the company of non-handicapped individuals.

Support services for deaf students were first initiated in 1964 when two deaf students enrolled in the National Leadership Training Program in the Area of the Deaf. As other deaf students sought admission, funds to pay for interpreters were solicited from community service clubs. Later, funds from the California State Department of Vocational Rehabilitation covered the cost of support services for a growing number of deaf students. Federal monies were sought in 1974, since 60% of the deaf student body comes from states other than California.

The first federal grant for support services, through Section 625 of the ESEA legislation, came from Bureau of Education for the Handicapped in 1975. The amount was increased in 1976 but remained at the same funding level for 1977.

Since funds for 1977 have been held to the same level as those for 1976, this means that we will have to: (1) reduce support services for those currently enrolled, (2) admit fewer students, especially multi-handicapped students who require additional increments of support services, (3) curtail our summer course offerings, and (4) eliminate a "New Careers in Business" program, which has the partial financial support of several major corporations but requires support services to be successful.

If funding is not increased substantially, this can result in deaf students who live in western America going instead to eastern institutions. Instead of the integrated education they seek, they will have to be educated in a segregated setting. Instead of participating in a proven cost-effective program at CSUN, they will be forced to seek their education in institutions that operate at considerably greater cost to the federal government.

STATEMENT OF ROY L. PIERCE, PROGRAM DIRECTOR, REGIONAL CENTER FOR THE DEAF, DELGADO COLLEGE, NEW ORLEANS, LA.

Mr. PIERCE. Mr. Chairman, I am Roy Pierce, Director of the Regional Center for the Deaf, Delgado College, New Orleans, La.

We have served students since 1968, and we have drawn students from 35 different States throughout the Nation. The center has traditionally worked with students primarily from the eastern seaboard, along the Middle Atlantic States and the South. However, we have accepted students from the Western States, such as Oregon, Washington, New Mexico, and Arizona. It may also be added that 56 percent of the deaf students served by Delgado College originate from outside the State of Louisiana. Recruitment has been primarily directed toward out-of-State students. The best method of accomplishing this is through personal contact with the students. Evidence suggests that the effort and funds spent on recruiting give the student the opportunity to make an informed decision about his vocational training objectives, and it has given them the same opportunity for postsecondary education as the hearing students.

The overall goal of our program is employment of the deaf student. We provide vocational evaluation, guidance and counseling, remedial instruction, and personal and social adjustment for deaf students with the objective of terminal training or transfer to a 4 year or 6 year postsecondary facility.

The program is divided into four major components—the preparatory services, counseling services, interpreting services, and supportive services.

Delgado permits a deaf student to obtain training in each area he desires consistent with his academic abilities. Today our students have majored in 33 different curriculums and 3,300 different courses.

A particular uniqueness of the college is that it can provide training at a level from the basic trades through the technical engineering division. Our program serves as a catalyst for other programs in the college and community. Included in this is the manual communication (which has a budget of $29,000) and the continuing education program for the adult deaf (which has a budget of $16,000). The manual communication program offers training for those who wish to become interpreters or desire to learn sign language for personal use. An exceptional response to this program has increased the enrollment from 30 majors in the summer of 1976 to 64 majors in spring of 1977. The continuing education program is a joint effort of Delgado College and Gallaudet College providing the adult deaf retraining and enrichment. Approximately 8,000 deaf adults in the New Orleans area are eligible for these services. This program allows the deaf adult to participate in adult basic education and G.E.D. program. The RECD provides interpreting time for the deaf adult when he is on campus. Both of these formerly excluded deaf persons from participating in their programs. The response to the continuing education program will make it necessary to hire more interpreters in the future, and will require the RECD to provide additional supportive services for the night classes.

Other areas in which the deaf program has acted as a stimulus include workshops in the areas of sign language, work evaluation, counseling, and interpreter training. In order to provide these quality services for our students and the community we must obtain the funding necessary to meet their needs.

With the introduction of the continuing education program, the demand for qualified interpreters, counselors and et cetera, increases. The increased demand placed upon our services, coupled with inflation, makes present level funds inadequate. In times of inflation our budgets must increase with our services to stay at the present level. With no increase we are faced with reducing services, and we are aware of what can happen without an increase in funds. You have general cutbacks in the personnel and services that must occur. Thus, again, you are reducing your general services to the deaf person and, again, decreasing his opportunities to be a full-fledged citizen in his own community.

So we are requesting, if at all possible, a reasonable increase in funds for the year 1978.

Thank you.

Senator **Randolph**. Thank you, Roy.

Where is Delgado College?

Mr. **Pierce**. New Orleans, La., in the main city.

Senator **Randolph**. You have said that there are 8,000 persons who are listed in New Orleans, La.

Mr. **Pierce**. Yes, this is in Greater New Orleans.

Senator **Randolph**. You also expressed the need for more interpreters, Roy. Now I realize the need is there. Will you explain that to the subcommittee in numbers? How many are needed? Give us a breakdown if you can.

Mr. **Pierce**. We have not been able in the past to provide services to the adult classes at night simply because we didn't have the trained people available. Last year during the summer Delgado was able to introduce an associate degree level interpretive training program, and from this we will have graduating two interpreters this year in May. Those interpreters are currently working for us. They have enabled us to extend services to the adult at night.

We are extremely limited in interpreters in the South. We have a few very well qualified interpreters, but not a lot, not enough to cover the educational needs, medical needs, and law needs in the South. So that is the purpose of our particular training.

Senator **Randolph**. How long, from the standpoint of training or instruction, education, does it take to give you a qualified interpreter?

Mr. **Pierce**. It depends on the individual. Basically 2 years, and then they will need additional workshops, et cetera, to increase their skills, to maintain their skills.

Senator **Randolph**. What size staff would you need to, say, train 100 a year?

Mr. **Pierce**. Well, I can give you an example, that we have now 142 students. If this will help, we have one full-time person and we have four part-time people. That is the training staff.

Senator **Randolph**. And would that be adequate?

Mr. **Pierce**. We are meeting the responsibility at the present time.

Senator **Randolph**. What are you turning out? You said two a year.

Mr. **Pierce**. We just started the program. These will be our first graduates.

Senator **Randolph**. You indicate the problem of funding.

Mr. **Pierce**. Delgado is funding the program at the moment.

Senator **Randolph**. There is no problem at the moment?

Mr. **Pierce**. No, sir.

Senator **Randolph**. Thank you very much.

Mr. **Pierce**. Thank you.

Senator **Stafford**. Mr. Pierce, you say in times of inflation your budget must increase if you are just to keep your services at the present level.

Mr. **Pierce**. Yes, sir.

Senator **Stafford**. How much extra money would you like to have?

Mr. **Pierce**. I would estimate about a 12-percent increase.

Senator **Stafford**. A 12-percent increase?

Mr. **Pierce**. Yes, sir.

Senator **Stafford**. Your present budget is what?

Mr. **Pierce**. Our present Federal funds total $218,606.

Senator **Stafford**. So, you would like an increase of 12 percent.

Mr. **Pierce**. For 1978.

[The prepared statement of Mr. Pierce follows:]

ORAL TESTIMONY

Subcommittee on the Handicapped
Mr. Jennings Randolph - Chairman

Delgado College
Regional Education Center for the Deaf
New Orleans, Louisiana

Roy L. Pierce
Program Director
February 24, 1977

In 1968, the Delgado College Regional Education Center for the Deaf began as a Research and Demonstration project, funded jointly for a five year period by the Bureau of Educationally Handicapped and the Rehabilitation Services Administration. Delgado College was selected primarily because of its historical involvement in training handicapped people since the college opened in the early 1900's. Delgado College continues to serve the needs of the handicapped with many of the Rehabilitation Center's former clients and other multiple handicapped enrolled in the college. The physical plant is barrier free, enabling wheelchair-bound students to attend classes with ease.

As a result of the 625th amendment Delgado College received federal funds to serve deaf students. Results of this have been the expansion of services and the ability of staff members to travel to various state schools for recruitment purposes, increasing the visibility of the program and the potential to serve a greater number of students.

As the name implies the Delgado College, Regional Education Center for the Deaf serves students from a multi-state region. We have drawn students from 35 different states. The Center has traditionally drawn students primarily from along the Eastern seaboard, the Middle Atlantic states, and the South. However, students have been accepted from Western states such as Oregan and Washington. It may also be added that 56% of the deaf students served by Delgado College originate from outside the State of Louisiana. Recruitment has been primarily directed towards out-of-state students. The best method of accomplishing this is through personal contact with the students. Evidence suggests that the effort and funds spent on recruiting give the student the opportunity to make an informed decision about his vocational training objectives.

The overall goal of our program is employment of the deaf student. We provide vocational evaluation, guidance and counseling, remedial instruction, and personal and social adjustment for deaf students with the objective of terminal training or transfer to a 4 year or 6 year post secondary facility.

The program is divided into four major components - the preparatory services, counseling services, interpreting services, and supportive services.

The preparatory services consists of classes during the student's first semester at Delgado. It is designed to allow the student to explore different vocational areas, improve communication skills, and to learn new skills needed for personal adjustment into a college and urban community.

Counseling services aid the student in adapting to his/her new environment. In addition, students are given assistance in vocational guidance, personal adjustment and community adjustment. The interpreting services provides the student with an interpreter in the classroom setting and outside of the classroom. Included in this are campus activities, community activities and personal matters. Other supportive services consist of notetaking, tutoring, speech therapy, and hearing aid evaluation and adjustment.

Delgado College permits the deaf student to obtain training in any area he desires consistent with his academic abilities. To date, our students have majored in 33 different curriculums, and enrolled in 330 different courses. A particular uniqueness of the college is that it can provide training on various levels from basic trades to technical engineering."

Our program has also served as a catalyst for other programs serving the deaf in the college and community. Included in this is the Manual Communication (which has a budget of $29,000) and the Continuing Education Program for the Adult Deaf (which has a budget of $16,000). The Manual Communications Program offers training for those who wish to become interpreters or desire to learn sign language for personal use. An exceptional response to this program has increased the enrollment from 30 majors in the summer of 1976 to 64 majors in spring of 1977. The Continuing Education Program is a joint effort of Delgado College and Gallaudet College providing the adult deaf retraining and enrichment. Approximately 8,000 deaf adults in the New Orleans area are eligible for these services. This program allows the deaf adult to participate in Adult Basic Education and G.E.D. Program. The RECD provides interpreting time for the Deaf adult when he is on campus. Both these formerly exclude deaf persons from participating in their programs. The response to the Continuing Education program will make it necessary to hire more interpreters in the future.

Other areas in which the deaf program has acted as a stimulus include workshops in the areas of sign language, worker evaluation, counseling and interpreter training. In order to provide these quality services for our students and the community we must obtain funding necessary to meet their needs. With the introducation of the continuing education program, the demand for qualified interpreters is increasing This increased demand placed upon our services coupled with inflation, make present levels of funding inadequate. In times of inflation our budget must increase if we are to just keep our services at our present level. With no increase, we are faced with reduced services. We are aware of what can happen without an increase in funding .....ultimately it is the deaf person who suffers.

GENERAL INFORMATION

Total students 1976	97
Total students since inception of program	325
Cost of program 1976	218,606
Cost/student to federal govt. 1976	2,253.67
No. of different majors	33
No. of applications	Approx. 45 as of 2/18/77 Equal to amount we had in 8/76
No. of individual courses	330

MANUAL COMMUNICATIONS

Summer 76	30 majors	68 students
Fall 76	52 majors	102 students
Spring 77	64 majors	142 students
Budget	29,000	

CONTINUING EDUCATION

Starting date	January 15, 1977
Budget	16,000

Gallaudet College is providing 10,000 seed money for 1977.

Delgado College, 6,000 for 1977.

Majors the Deaf Students have been enrolled in and by divisions.

ALLIED HEALTH

Respiratory Care Technology
Orthotics-Prosthetics

BUSINESS STUDIES

Data Processing
Business Administration
Business Training (Certificate)
Secretarial Studies
Clerical (Certificate)
Co-operative Mid-Management

EDUCATION AND PUBLIC SERVICES

Early Childhood Education
Library Service

ENGINEERING AND INDUSTRIAL TECHNOLOGY

Aerospace Engineering
Architectural Engineering
Electrical Engineering
Engineering Graphics
Air Conditioning Servicing
Petroleum Engineering
Civil Engineering

GENERAL STUDIES

Computer Science
Fine Arts
General Arts
Horticulture

OCCUPATIONAL TRADES TECHNOLOGY

Carpentry
Electrical Construction
Plumbing
Cabinet Making
Painting-Decorating
Food Technology
Machinist
Welding
Motor Vehicle Technology
Commercial Art
Graphic Arts
Food Preparation Specialist

Deaf students, in addition to studying in their major field, have been enrolled in courses ranging from math, cience, and social studies and have used electives from all curricula. Deaf students have been enrolled in approximately 330 courses offered at Delgado.

Senator STAFFORD. Mr. Jones, in your particular case?

Mr. JONES. In our particular case the 12 percent would cover the cost of inflation, but it would not permit us to serve additional students.

Senator STAFFORD. It would not permit you to expand?

Mr. JONES. To extend our services to additional students we would have to find ways to limit our enrollment to about what we have at the present time.

Senator STAFFORD. You would like to expand your enrollment?

Mr. JONES. Yes, we would.

Senator STAFFORD. Would you estimate what you would need?

Mr. JONES. We had about a 10-percent increase in enrollment in the past 2 years.

Senator STAFFORD. So in terms of Federal funds, what would that mean?

Mr. JONES. Probably 20 percent.

Senator STAFFORD. Your present budget is how much?

Mr. JONES. $318,000.

Senator STAFFORD. So you need $60,000 or $70,000 more?

Mr. JONES. Yes.

Senator RANDOLPH. Thank you, Senator.

Three years ago we had in the law, of course, the authorization and the funding which took care of this program for the deaf. That was when we started the program. I do think there needs to be increased attention to this problem of the interpreters. We don't want to have the money not be used as it needs to be used, but it appears to me that you have not graduated a sufficient number of interpreters, Roy, to do the job. I would like to ask you a specific question on that point.

How many interpreters would be needed nationally to serve children who have been mainstreamed appropriately into the regular public school classroom? Then tell us how many interpreters would be needed in Louisiana.

Mr. PIERCE. I am not prepared to answer that question.

Senator RANDOLPH. Another panelist can answer me.

Mr. LAURITSEN. I am Bob Lauritsen from the St. Paul Technical Vocational Institute.

A number of us have been involved in interpretive training, and I am delighted you are taking this interest at this time in interpretive training. You have expanded the question considerably since your first remarks to Mr. Pierce.

We feel for the postsecondary population and for deaf persons that we would need a minimum of about 2,000 interpreters across the entire United States.

Senator RANDOLPH. How many are there now?

Mr. LAURITSEN. I am guessing there are just 400 to 500 that we might be able to draw on, but that is a very hard pool to get at.

Now, if you are going to expand into the mainstream concept, which we think is great, we think you could multiply that 2,000 figure by a factor of five or six and talk about 10,000 to 12,000 interpreters.

Senator RANDOLPH. Would it be possible for you to supply the subcommittee with more complete data on these figures?

Mr. LAURITSEN. I can research that question for you.

Senator RANDOLPH. I wish you would do that and supply it.

You know, there are certain funds—Federal funds or State funds or local funds—that are spent not as expenditures but as investments. Here is not just the so-called cost-benefit ratio, where you can get back as much as you put in, but here you get back the original expenditure and you also have a dividend. That is what I think of so many times in reference to moneys that are spent in educating the handicapped.

I think it is very important, therefore, that we perhaps reduce the expenditures, Senator Hatch and Senator Hayakawa, in other areas of funding and give more attention to programs of this type which are being explained to us this morning. I feel that very strongly. I am not making a speech, but I do want to emphasize and reemphasize that there are human priorities which are being overlooked at the present time in the allocation of Federal funding.

Senator HATCH. I wonder if it would be possible, since I am a relatively new Senator, for your witnesses to provide us with some information on the types of training for interpreters, the extent of the training and costs of training and the necessity for training in the future, as much as you can give us on this.

This is an area where I am just very, very grateful to have my distinguished colleague, Senator Randolph, as chairman of this particular subcommittee because he has great dimension and great interest, and I believe he can help solve some of these problems, and if he doesn't I am going to be right behind him to push him a little.

Senator RANDOLPH. Good. That is fine.

Senator HATCH. If you give us as much knowledge as you can that not only includes the economics involved but includes the practical aspects.

Senator RANDOLPH. Pat, I want you to say what is being done by the subcommittee. Few people know about it, but just add it at this point.

Mrs. FORSYTHE. The Senate Subcommittee on the Handicapped has organized its own sign language class, on the Hill, and Gallaudet College in Washington is going to provide them with two teachers. So far 51 Senate staffers have registered for the sign language class.

Senator RANDOLPH. Two or three from your staff, Senator Hayakawa.

Mr. LAURITSEN. I would like to interject one more comment on handicapped persons with hearing persons. We have a club that recently organized itself in St. Paul. I am the hearing son of deaf parents, so deafness has been a part of my life.

I heard something a week ago today that I had never heard before, and I think it is quite nice and very fitting if we take the deaf student and the hearing student and try to think of how we can put that into a hearing environment. Our deaf and hearing students came up and said, "We are providing deaf education among friends."

Senator RANDOLPH. That is excellent. Thank you. Among friends.

Mr. LAURITSEN. Deaf education among friends.

Senator RANDOLPH. I hope we learn to live in a world like that someday, where we will be friends.

I shouldn't take this time, but I want to tell you something said to me by the head of the Catholic diocese in West Virginia. We have for a long time been friends, and I call him on his anniversary and birthday each year. Recently I called him for that purpose. I am a Baptist, of course, but at the close of the conversation I said, "Bishop, keep the faith."

He chuckled and I can almost hear him now, "Keep the faith," he said, "I don't keep it. I spread it."

I think it is very necessary that we do share, and you have said that. It is very important. I think at long last perhaps we are beginning to understand, not just be aware but understand. So often we say, "Oh, I am tolerant." It doesn't mean anything really, but if you try to understand, I think that means very much.

Who is next?

STATEMENT OF RONALD H. LaFAYETTE, SEATTLE COMMUNITY COLLEGE, SEATTLE, WASH.

Mr. LaFayette. Mr. Chairman, my name is Ron LaFayette. I am employed by the Seattle Community College as a coordinator of a regional program. Our services to the surrounding deaf population include one of the regional resource programs, as well as interpreter training program, and a continuing education program for deaf adults.

As you are well aware, society's low expectations of disabled persons often contribute to their own self-limiting aspirations, and this is a common barrier in the attempt to provide them with educational opportunities. This is particularly true when working in a mainstream or integrated environment as provided by our regional education programs. With this perspective it is significant that deaf adults enrolled in the regional programs are presently attending classes in more academic and career education areas than ever before. Included in these are nearly 100 courses of study preparing students for employment in a wide variety of vocations. As a result, many graduates are working in jobs held for the first time by a deaf person, in settings where a disabled adult has never been employed.

I want to mention that over 90 percent of the graduates from all of the programs represented here are presently employed in areas related to their preparation. Time is a significant reversal in a trend of unemployment and underemployment of deaf persons.

This success fulfills a primary goal of the 625 legislation and a number of factors have contributed to it. The host institutions themselves have been important in that they provide a variety of curriculum and a stimulating educational atmosphere along with enthusiastic support. Educators, student peers and others in these schools not experienced in working with the deaf are often our students' greatest advocates. Through their encouragement, advice, teaching, and friendship, deaf students are helped to realize their potentials. Each regional program can cite examples of a student succeeding as a result of this kind of help. However, the supportive services model developed by the regional programs and implemented by professionals employed under the 625 legislation makes access to these rich educational environments possible.

Through the provision of interpreting, counseling, note taking, and tutoring, deaf students who may never have had the opportunity enter careers that match their interests, skills, and potential. Each program presented here—California State University at Northridge, St. Paul Technical Vocational Institute, Delgado College, and Seattle Community College—has a history of competitively employed graduates. Presently each has a core of students enrolled who continue to try new things and whose success will stimulate others to do the same.

The supportive service model refined in the development of career educational opportunities has recently been extended to continuing education. The life-long learning requirements of the deaf for self-improvement, special interests, job advancement and other educational goals have stimulated their interest in adult education offerings through a variety of community agencies and educational institutions. The potential participation of the deaf community, as indicated by these initial efforts, is significant. These adult education activities lend themselves well to the regional education program concept and are consistent with the intent of the legislation.

The regional education program for the deaf and other handicapped persons have demonstrated the feasibility of integrating deaf persons into existing postsecondary institutions. Deaf adults with varying abilities and interests from every State have participated in these programs and subsequently found related employment. Continuing education programs are being initiated in response to the lifelong learning needs of these adults as well. The continued support of these programs is a commitment to the educational enrichment and competitive employment of deaf adults in our country. We ask your continued support.

Thank you.

Senator RANDOLPH. Thank you for your testimony.

Could you tell us very quickly about Louisiana and the number 8,000; is that correct?

Mr. PIERCE. That is for New Orleans. It is not the total State.

Senator RANDOLPH. What would you say about the number in Seattle?

Mr. LAFAYETTE. In the Seattle area there are about 5,000 deaf adults. Our program serves a much larger area in that we have students from 22 States in our program at the present time.

Senator RANDOLPH. I presume from what has been said that in those institutions doing what you are doing, the students come from all parts of this country?

Mr. LAFAYETTE. That is correct.

Senator RANDOLPH. Some students from West Virginia are on the west coast?

Mr. JONES. Yes.

Senator RANDOLPH. What about foreign countries? That has not been touched on today. Are students from countries other than the United States a part of the educational program?

Mr. JONES. We have students attend our program from several foreign countries, although they are asked to pay an additional tuition to cover the amount of the funding from the Federal Government. The reason students come from so far, so many different places, is that each of programs is different in that it offers different kinds of services for students, and each of us has a program that is unique in that perhaps no other institution offers a course or a program to a deaf person in a particular area.

Senator RANDOLPH. In your school do you have separate or combined programs for the blind and the deaf?

Mr. LaFayette. In our institution we have a program for blind students that uses the same sort of supportive service model. It is funded under a bond, but it is a concept that has worked well in our technical and academic programs.

Senator Randolph. They don't really have to be separated, do they?

Mr. LaFayette. Yes; they are separate programs.

Senator Randolph. I know, but they can be under the same umbrella within an institution.

Mr. LaFayette. You mean on the same staff of personnel?

Senator Randolph. Yes.

Mr. LaFayette. Well, some services are combined with secretarial and those kind of services, but different professionals are employed.

Senator Randolph. But at the same university or same college or the same institution?

Mr. LaFayette. Yes, indeed, they are on the same campus.

Senator Randolph. Just as in West Virginia we have the schools for the deaf and blind at Romney, W. Va. They are working there upon one campus. They are living together and working together. As someone said, they are friends, very understanding friends.

Thank you very much.

[The prepared statement of Mr. LaFayette follows:]

TESTIMONY TO THE SENATE LABOR AND PUBLIC WELFARE COMMITTEE
SUBCOMMITTEE ON THE HANDICAPPED

Senator Jennings Randolph, Chairman

February 24, 1977

Mr. Chairman: My name is Ronald H. LaFayette. I am employed by Seattle Community College as the coordinator of a Regional Education Program for Deaf Persons under the provisions of Section 625 of the Elementry Secondary Education Act 1974. I appreciate the opportunity to report to the committee on several aspects of progress the Regional Programs have accomplished in making the concept of equal access to post-secondary education a reality for over 2,500 deaf adults in America.

As you are well aware, society's low expectations of disabled persons often contributes to their own self-limiting aspirations, and is a common barrier in the attempt to provide them with educational opportunities. This is particularly evident when working in an integrated or "mainstream" environment as provided by the Regional Education Programs. With this perspective it is significant that deaf adults enrolled in the Regional Programs are presently attending classes in more academic and career education areas than ever before. Included in these are nearly one hundred courses of study preparing students for employment in a wide variety of vocations. As a result, many graduates are working in jobs held for the first time by a deaf person, in settings where a ~~disabled~~ adult has never been employed. It should be noted that over ninety percent of the graduates from Regional Programs have found employment in areas related to their preparation. This is a significant reversal in a trend of unemployment and underemployment of deaf persons.

This success fulfills a primary goal of the 625 legislation and a number of factors have contributed to it. The host institutions themselves have been important in that they provide a variety of curriculum and a stimulating educational atmosphere along with enthusiastic support. Educators, student peers and others in these schools not experienced in working with the deaf, are often our students greatest advocates. Through their encouragement, advice, teaching and friendship, deaf students are helped to realize their potentials. Each Regional Program can site examples of a student succeeding as a result of this kind of help. However, the supportive services model developed by the Regional Programs and implemented by professionals employed under the 625 legislation makes access to these rich educational environments possible. Through the provision of interpreting, counseling, note taking, and tutoring, deaf students who may never have had the opportunity, enter careers that match their interests, skills and potential. The success of one graduate leads to the success of another. Each program represented here (California State University at Northridge, St. Paul Technical Vocational Institute, Delgado College and Seattle Community College) has a history of competitively employed graduates. Presently each has a core of students enrolled who continue to try new things and whose success will stimulate others to do the same.

The supportive service model refined in the development of career educational opportunities has recently been extended to contining education. The life-long learning requirements of the deaf for self improvement, special interests, job advancement and other educational goals have stimulated their interest in adult education offerings through a variety of community agencies and educational institutions. The potential participation of the deaf community as indicated by these initial efforts is significant. These adult education activities lend themselves well to the Regional Education Program concept and are consistant with the intent of the legislation.

The Regional Education Programs for The Deaf and Other Handicapped

Persons have demonstrated the feasibility of integrating deaf persons into existing post-secondary institutions. Deaf adults with varying abilities and interests from every state have participated in these programs and subsequently found related employment. Continuing education programs are being initiated in response to the life long learning needs of these adults as well. The continued support of these programs is a commitment to the educational enrichment and competitive employment of deaf adults in our country. We ask your continued support.

Thank you.

Senator RANDOLPH. Who is the next witness?

STATEMENT OF ROBERT R. LAURITSEN, DIRECTOR, ST. PAUL TECHNICAL VOCATIONAL INSTITUTE, ST. PAUL, MINN.

Mr. LAURITSEN. Mr. Chairman, my name is Bob Lauritsen. I am director of the program for deaf students at the St. Paul Technical Vocational Institute.

I have three factors that I would like to very briefly highlight. The first is that we feel that Federal cooperation in supplying both dollars and leadership is essential to the continuance and growth of the regional education programs, and for the very reason that you have just been discussing, that our students do not come from just our own States, they come from far afield. Very simply stated, the State of Minnesota will not and should not pay for the cost of education for students from other States.

I think it is of interest to point out that the moneys provided to us by BEH (Bureau of Education for the Handicapped) are the base of a pyramid of funding. At St. Paul TVI this year we have a BEH contract of $281,746. We have secured an additional $301,000. Without that Federal base we would not have been able to get the extra moneys.

The second factor I would like to highlight is that we feel regional education programs are not only cost effective but they are profitmaking.

One year ago Senator Mondale, then member of this committee, visited St. Paul TVI. He read a statement we had prepared that indicated our initial 225 deaf graduates had paid Federal income tax dollars on earnings that were $89,800 over and above the Federal funds that had been awarded to St. Paul TVI to provide training for deaf students. The Senator observed that the $89,900 figure would increase geometrically with every passing year since the initial graduates continue to be employed and new graduates are joining the work force on a regular basis thus increasing the taxpaying base.

Senator RANDOLPH. I am glad you are talking about that. That is what I was saying earlier today, there is a dividend, there is this plus. We find it so often, and I am glad that you are stating it. Do it once again for the record.

Mr. LAURITSEN. Mr. Mondale read a statement that we had prepared that indicated our initial 225 deaf graduates had paid Federal income tax dollars on earnings that were $89,800 over and above the Federal funds that had been awarded to St. Paul TVI to provide training for deaf students.

Mr. Mondale made a very interesting observation. The Senator observed that the $89,000 figure would increase geometrically with every passing year since the initial graduates continue to be employed and new graduates are joining the work force on a regular basis, thus increasing the taxpaying base. When he said that I just cheered.

Senator RANDOLPH. You can cheer him now as Vice President, can't you?

Mr. LAURITSEN. Yes, I sure can.

Last week I spoke with a vocational rehabilitation supervisor from Illinois. This supervisor has normal hearing and he has a deaf son that graduated from St. Paul TVI in carpentry. His son Scott has two accomplishments which are of interest. First, he has made his father a grandfather of a hearing son; and second, according to the father, Scott now earns more than his father just a couple of years after graduation. Scott is employed as a carpenter earning $9.50 an hour straight time. A 40-hour week, with a 52-week working year, is 2,080 hours. These hours at $9.50 yield $19,760 annually. Overtime is extra.

Year in and year out deaf graduates from St. Paul TVI enjoy a 96-percent success rate as measured by obtaining employment or continuing education. Scott's case is not an isolated case.

Senator RANDOLPH. It is a remarkable record. So few people understand. So many have never heard the figures that are now given. We hope the work being done here today—the testimony being given—will receive appropriate coverage by the media. It will be very helpful in getting a wider audience.

Mr. LAURITSEN. The third factor I would like to highlight is the increasing demand for postsecondary education for deaf persons, which has been created in large part by the creation of the regional education programs. We feel that the acceptance and availability of postsecondary education for deaf persons is beginning to reach parity with that for hearing persons. Just 10 years ago, less than 10 percent of deaf high school graduates had the opportunity for postsecondary education. An almost complete reversal seems to have taken place with 80 to 90 percent of qualified deaf high school graduates seeking postsecondary education today.

Our State residential school in Minnesota will graduate 21 students this spring; 19 of those 21 are looking toward postsecondary education.

Our day school program for deaf students in St. Paul will graduate 11 deaf students this spring with all graduates seeking postsecondary education.

St. Paul TVI continues to be a growth program. We have not peaked out in terms of students to be served.

The BEH (Bureau of Education for the Handicapped) can take credit for changing that figure of 10 percent of 10 years ago to 80 to 90 percent today.

[The prepared statement of Mr. Lauritsen follows:]

Testimony
Education of the Handicapped Act
Robert R. Lauritsen
St. Paul Technical Vocational Institute
February 24, 1977

Mr. Chairman. My name is Bob Lauritsen. I am Director of the Program for Deaf Students at the St. Paul Technical Vocational Institute (St. Paul TVI).

The four stipulated Regional Education Programs supported by Section 625 of the Education of the Handicapped Act are pleased to have this opportunity to present testimony in support of Extension of the Act.

Each of the Directors will make several points that we feel are of special interest and concern. Also speaking will be a hearing parent of two deaf students and two deaf graduates.

Before highlighting several factors, I would like to share a usage of the letters D E A F that indicate the spirit of Section 625. A student club organized by deaf students for both deaf and hearing students has elected to name their club Deaf Education Among Friends. This word usage reflects an attitude that is prevalent in the Regional Education Programs.

The first point I would like to highlight is that Federal cooperation in supplying dollars and leadership is essential to the continuance and growth of the Regional Education Programs. At St. Paul TVI we have conducted a number of investigations that demonstrate that traditional local, state and regional funding sources are not possible (see Appendix B of the written testimony). Simply stated, the state of Minnesota will not, nor should not, pay for the cost of educating a student from Pennsylvania. It should be noted that funding from Section 625 is the funding base for a pyramid of services for deaf persons. St. Paul TVI has a current BEH contract of $281,746. Additional monies in the amount of $301,260 have been secured for a total of $583,006, more than a doubling of financial resources. Without the base of Section 625 funding, these additional monies would not be possible.

The second factor I would like to highlight is that Regional Education Programs are cost-effective and profit-making. One year ago this month, then Senator Mondale, member of this committee, visited St. Paul TVI. He read a statement we had prepared that indicated that our initial 225 deaf graduates had paid Federal Income tax dollars on earnings that were $89,800 over and above the federal funds that had been awarded to St. Paul TVI to provide training for deaf students. The Senator observed that the $89,800 figure would increase geometrically with every passing year since the initial graduates continue to be employed and new graduates are joining the work force on a regular basis thus increasing the tax-paying base.

Last week I spoke with a vocational rehabilitation supervisor from Illinois. This supervisor who has normal hearing, has a deaf son that graduated from St. Paul TVI in Carpentry. The son, Scott, has two accomplishments of interest. First, he has made his father a grand-father (a hearing grand-son). Secondly, according to the father, Scott earns more than his father. Scott is employed as a Carpenter earning $9.50 an hour straight time. A 40 hour week, 52 week working year is 2080 hours. These hours at $9.50 an hour yield $19,760 annually. Overtime is extra.

Year-in, year-out deaf graduates from St. Paul TVI enjoy a 96 per cent success rate as measured by obtaining employment or continuing education. Scott's case is not an isolated case.

The third factor I would like to highlight is the increasing demand for post-secondary education for deaf persons. We feel that the acceptance and availability of post-secondary education for deaf persons is beginning to reach parity with hearing persons. Just ten years ago, less than ten per cent of deaf high school graduates had the opportunity for post-secondary education. An almost complete reversal seems to have taken place with 80-90 per cent of qualified deaf high school graduates seeking post-secondary education today. The Minnesota School for the Deaf will graduate 21 students this spring...19 of these 21 graduates are seeking post-secondary education. The day school program for deaf students in St. Paul will graduate 11 deaf students this spring with all graduates seeking post-secondary education. St. Paul TVI continues to be a growth program. We have not peaked out in terms of students to be served.

The Regional Education Programs have become a reality with the assistance of the Federal Government both in terms of leadership and financial support. The Regional Education Programs are cost-effective, profit-making and growth programs. The support of this Sub Committee has contributed immensely to the Regional Education Programs. We seek your continuing support.

Senator RANDOLPH. Thank you very, very much.

Now, this is a question that perhaps can go to all of the panel. You may have more than one answer. Could each of you give the subcommittee some idea of what you project for growth in the next 5 years?

I understand that you might not have this information immediately available, but we would like for you to prepare it and provide it for the printed record.

Mr. LAURITSEN. Perhaps while we are doing some jotting, we have a parent who can speak, if that will be appropriate. Mr. Bernie Ames, who has two deaf sons at St. Paul TVI, has some remarks he would like to make.

He is also the author of a book, "Tips on Car Care and Safety for the Deaf Person," which is published by the U.S. Department of Transportation, National Highway Traffic Safety Administration. Mr. Bernie Ames.

Senator RANDOLPH. If you will take the microphone closer.

STATEMENT OF BERNARD M. AMES, OF MARYLAND, FATHER OF TWO DEAF SONS

Mr. AMES. Mr. Chairman, my name is Bernie Ames. I am from Maryland. I work here down the street a bit.

I was asked to come here primarily because I am local and I am a parent with two children attending school in St. Paul TVI.

Now, some of the remarks I make may be controversial and because of this will cause me some flak in some circles, but they are my opinions based on my experience with my youngsters.

I have got two youngsters that are deaf, Mark and Mike. They both expect to graduate from St. Paul TVI this June, one in sheet metal fabrication and welding and the other one in architectural drafting.

Over the years I have had a lot of problems with these youngsters, but I hope next year at this time my main problem is worrying about whether they have filled out and submitted their income tax returns.

I have four children. Mark and Mike were born deaf. Both began some sort of formal education at about age 4, even before that. When they were 1½ or 2 years old we started to try to teach them, using correspondence courses from the John Tracy Clinic in California.

Here is where some of the controversy comes in. When Mark reached age 4, really where he could get some formal schooling, we were looking around to try to find the best school to put this youngster in. Now, we got involved in a controversy among some people in deaf education, a controversy which still exists. On the one side we have the oralists, those people who believe that any deaf child can be taught to speak and to read lips and learn. They completely abhor any sign language. No sign language whatsoever.

On the other side were these people who believed in what they now call the total communication concept, where they felt getting the message across is the primary requirement, and whether you use sign language, speech, shrugs, voice or anything else, get the message across.

Well, Mark had already been accepted for the residential school in Maryland, which did use sign language, but some prominent professionals suggested to me that perhaps I ought to move to a location where this oralist school was available and in that way the boys would be home every day and have a normal home life, and I would not be sort of failing in my responsibilities as a parent.

So this we did, and as far as we are concerned and education of our boys, this was the biggest mistake we ever made. They spent 10 to 11 years in this school, and my wife and I each spent several hours each night with one boy each, trying to help with their homework and trying to teach them to speak. Our other two children were neglected. The only benefit they got out of this was they got a good educational background by listening to our lessons given to the other boys.

When both of these youngsters were the equivalent of about seventh grade, they were taken for a periodic evaluation, an IQ test and reading tests. It was determined at this time that their IQ's were very, very high, but they read at approximately the second grade level, and this was after 9 and 10 years respectively in this oralist school.

We even hired tutors at some expense to try to improve their reading. So obviously for them the oralist school did not work, and I understand that school has now adopted the total communication concept, but that is a little bit too late for my sons.

Well, we finally got them enrolled in the residential school in Maryland, where they used the total communication concept, and they did very well. Unfortunately, the time spent in the other school was almost a total waste as far as I am concerned. Even more unfortunately, the school at Frederick could not completely make up the educational deficit as far as reading and vocabulary were concerned.

After graduating from Frederick, Mike wanted to go to Gallaudet College and Mark wanted to go to the National Technical Institute for the Deaf in Rochester, N.Y., but despite their high IQ's they couldn't read well enough to pass the entrance test, so this left very few options open to us for post-high-school level education.

Now, Maryland itself has a relatively new vocational rehabilitation center, and both boys spent some time there, but at that particular time this was a relatively new facility. It didn't have the extensive range of courses, and the courses were somewhat limited in scope. This was 3 years ago, and I don't know their current status. This is not criticism of the facility itself. They are doing an excellent job, but they are relatively new.

The counselors then at the Maryland Vocational Department of Rehabilitation decided that based on the boys' exhibited ability in testing, they were capable of greater things than could be provided at that particular time at the Maryland Rehabilitation Center, which, incidentally is geared for all types of handicapped, just about.

So they recommended we send our boys to the St. Paul Technical Vocational Institute. Now, this we did, and we are very happy we did so. We are very happy that such a training facility exists, because in addition to getting normal academic training they got a broad education. They were required to fly out there and back without any assistance from their parents, for the first time to take a taxicab and tell them where they had to go, arrange for their own apartments, pay their own bills, do their own shopping. So, thus, in addition to the academic training they received a well-rounded education.

Now, while we would have liked both of those boys to get college degrees, the earlier problems we experienced prevented this. So I thank God for TVI and other programs, and for the good wisdom of people who arrange for such facilities to be made available. I don't know what I would have done without them, and I thank you.

Senator RANDOLPH. Thank you, Bernie, very much. We were wondering, as we listened to your story, if your children would have been further along educationally if they had had the opportunity for an intensive comprehensive program at an earlier—say at a very early age?

Mr. AMES. In my opinion, Senator, they would have had a better opportunity and would probably be attending Gallaudet College now if the educational program at that particular school had used the total communication concept whereby if you can't communicate strictly by speech, then you use sign language, shrugs or whatever happens. It was this philosophy of education which was the problem here, and I get a little bitter sometimes because over the years my kids get involved in experiments of one type or another and don't pan out and get me mad. But I felt if they had spent the entire schooling at the residential school at Frederick, where they could have gotten sign language in addition to speech training and other things, that they could have gotten a well-rounded education.

Senator RANDOLPH. That is the point. That is why I am asking about starting at an earlier age.

Mr. AMES. Right. Right off the bat.

Senator RANDOLPH. This is a learning process, you know, a practicing process, a participating process. Now, parents would be involved, too, would they not?

Mr. AMES. Sure.

Senator RANDOLPH. I remember when we had witnesses from our State of West Virginia, and we wanted to start in that State a comprehensive center or centers for handicapped children. We also remembered the parents. You do too, I hope, because it can't be a separate program for children and parents when you are working with these young minds.

Mr. AMES. Senator, those children will after awhile, if you can't communicate with them as a parent—and there are some parents I know who won't take the time to try to learn sign language to communicate with their own children—if you don't try to communicate with your youngsters, forget them. They are going to forget you. [Applause.]

Senator RANDOLPH. You have the schools. We have been intensely interested in the program changes, all, we hope, constructive.

How many handicapped people do you employ in the schools?

Mr. AMES. I can't answer that. I am not in the school system.

Mr. LAURITSEN. At the St. Paul Technical Vocational Institute in the program for deaf students, of a staff that exceeds just a little over 40 persons, we have 4 persons who are handicapped. They all have hearing impairment. One of them is a hearing impaired secretary, and she is our primary telephone answerer, and if you have an opportunity to call our school about our program, it is a good learning process for a hearing person, including parents, to have a hard of hearing person answer the telephone and have the telephone not in the normal mouth-ear position, but on the mouth to the chest to pick up the hearing aid, and she does a superior job. So we have four.

Senator **Randolph.** Four, yes.

Mr. **Jones.** At California State, 5 of 15 full-time employees are handicapped. One, in addition to being deaf, is also physically handicapped.

Mr. **LaFayette.** We have 30 full-time men and part time we have 3 hearing-impaired and deaf adults working on our program.

Mr. **Pierce.** At Delgado in our center we have 19 full-time and part-time people. Two are deaf, one male and one female, and myself, I am hard of hearing.

Senator **Randolph.** Is this a good percentage, Pat?

Mrs. **Forsythe.** No.

Senator **Randolph.** No, it isn't. We are not being carping critics this morning, but sometimes, you know, self-discipline is very difficult, both personally and in the organization or the structure we work with. I am not saying that we feel you are not meeting your requirements, but you might think about it a little now. Perhaps some thoughts may arise from this discussion that might be helpful.

Thank you very much.

[The prepared statement of Mr. Ames, and additional material from Mr. Lauritsen, Dr. Jones, Mr. LaFayette, and Mr. Pierce, follow:]

TESTIMONY

IN

SUPPORT OF THE EXTENSION OF
THE EDUCATION OF THE HANDICAPPED ACT
WITH EMPHASIS ON SECTION 625

SENATE LABOR AND PUBLIC WELFARE COMMITTEE

SUBCOMMITTEE ON THE HANDICAPPED

JENNINGS RANDOLPH
SENATOR, WEST VIRGINIA
CHAIRMAN

BY:

Bernard M. Ames
(A parent with two deaf sons attending the St. Paul, Minnesota
Technical Vocational Institute, Program for Deaf Students)

February 24, 1977

Mr. Chairman: My name is Bernard Ames. I live in Fallston, Maryland, but I am a Federal employee working here in Washington. I have two sons presently undergoing vocational training at the St. Paul Technical Vocational Institute, Program for Deaf Students. Both are doing well and both expect to graduate this June, one as a sheet metal worker and welder; the other as an architectural draftsman. I would hope that by this time next year both would have good jobs and be worried about filling out and filing tax returns.

I have four children, Mark and Mike, the oldest, were born deaf. Each began some sort of schooling at about the age of 4. For a number of years even before that we tried to teach them by using correspondence courses from the John Tracy Clinic--It's been a struggle.

When Mark reached the age when he could get some formal schooling (age 4), we were caught up in the controversy among deaf educators as to the proper way to teach a deaf child. On the one side were the "Oralists" who believed every deaf child could be taught to read lips and speak--they abhorred the thought of "Sign Language." On the other side were those who believed in the "Total Communication" concept where getting the message across was the most important factor--whether it took signs, shrugs, body movements, speech, or all.

Although Mark had already been accepted for the Maryland State School for the Deaf, which did use the sign language, some prominent professionals suggested that I move to the big city which had an "Oral" school--they boys could be taught to speak and they'd return home every day, having a normal home life. So we moved to the city--the biggest mistake we ever made as far as our boys were concerned.

For years--10 to 11 I suppose--my wife and I each spent several hours each night, with one boy each, trying to help with homework and to teach them to speak. Our other two children were neglected--the only benefit they derived was a good educational background by listening to us trying to teach the other boys.

When they were of an age equivalent to seventh grade, their IQ's and reading levels were tested by professionals. They had remarkably high IQ's, but read at about the second grade level--after 9 and 10 years respectively in the "Oralist" school. We even hired tutors, at great expense, to try to improve their reading.

We finally managed to get them enrolled in the residential Maryland School for the Deaf--where they did extremely well. Unfortunately, the time they spent in the other school was almost a total waste, as far as I'm concerned. Even more unfortunately, the Frederick school could not make up the deficit completely.

After graduating from Frederick, Mike wanted to go to Gallaudet Collage and Mark to NTID in Rochester. . .but despite their high IQ's, they couldn't read well enough to pass the entrance tests. This left few options for post-high school level education.

Maryland has a relatively new Vocational Rehabilitation center, and both boys spent some time there. But at that time it was a relatively new facility--did not have a very extensive range of courses--and the courses were somewhat limited in scope.--This was three years ago--I don't know their current status.

The counselors of the Maryland Vocational Rehabilitation Department decided Mark and Mike were capable of greater things than could be provided at that time in the Maryland Rehabilitation Center--which was geared for all types of handicaps--and recommended we send the boys to St. Paul Technical Vocational Institute.

This we did, and we're happy that such a training facility exists. In addition to getting normal academic training, they have been required to fly there and back, on their own; arrange for their own apartments and take care of their own bills; do their own shopping; arrange for their own checking accounts. Thus, they have received a well-rounded education.

While we would have liked them to get college degrees, the early problems prevented this. But, Thank God for TVI and other like programs. I don't know what we'd have done without them.

tvi

235 MARSHALL AVENUE, ST. PAUL, MINNESOTA 55102 (612) 227-9121

April 1, 1977

Senator Jennings Randolph
Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Randolph,

California State University at Northridge, Delgado College, Seattle Community College and the St. Paul Technical Vocational Institute were most pleased to have presented testimony on February 24, 1977 before your Sub-Committee on Handicapped in support of the extension of the Education of the Handicapped Act. These four institutions were the original recipients of support from Section 625 of the Education of the Handicapped Act for the maintenance of Regional Education Programs for Deaf Students.

Thank you, members of your Sub-Committee and staff members for the opportunity you offered to present testimony. We are appreciative of your continuing interest and support of Section 625.

Pursuant to your question regarding our five year student capacity projections, we are submitting to you the projection statement developed at the request of Dr. Edwin W. Martin, Bureau of Education for the Handicapped. On January 26, 1977 Dr. Martin asked the Section 625 core programs to present minimum student capacity projections for the five years 1978-82 to assist the Bureau of Education for the Handicapped in developing budgetary plans that would facilitate the attaining of these minimum student capacity projections.

The five year projections for the four Section 625 core programs represent the minimum number of students our respective institutions feel we can accommodate without compromising our present standards or quality levels. There is no doubt we can meet these minimum figures and exceed them if given the opportunity.

Those of us in educational institutions across the country that are direct providers of services to handicapped persons are appreciative of your numerous activities to bring equality and enrichment to the lives of handicapped persons.

Thank you for your continuing leadership.

Sincerely,

Robert R. Lauritsen
for
Dr. Ray Jones, CSUN
Ron LaFayette, Seattle Community College
Roy Pierce, Delgado College

cc: Mr. Jim Powell, Staff Editor
Senate Committee on Human Resources
Room 4230
Dirksen Senate Office Building
Washington, D.C. 20510

St. Paul Public Schools

Independent School District 625

March 31, 1977

Five Year Projections (1978-1982)
For the Four Section 625 Core Programs

Following are the five year projections (1978-1982) for CSUN, Delgado College, Seattle Community College and St. Paul TVI that you requested in our meeting of January 26, 1977. These projections are minimum student capacity enrollments our respective institutions feel we can accommodate without compromising our present standards or quality levels. There is no doubt we can meet these minimum figures and exceed them if given the opportunity. The projections reflect the minimum number of students we expect to serve in the next five years. We have not included dollar projections, but will supply them at your request. We are hopeful that sufficient dollars will be available to these four Section 625 core programs so that the minimum student levels we have projected can be reached.

Chart I provides student enrollment numbers for the 1976-77 school year, applications for the 1977-78 school year and minimum capacity enrollment projected for the school years 1977-78, 1978-79, 1979-80, 1980-81, and 1981-82.

CHART I

Current Student Enrollment,
Applications for 1977-78,
Minimum Capacity Enrollment Projections for 1977-1982

	Student Enrollment 1976-77	Applications for 1977-78	Minimum Student Capacity 1977-78	78-79	79-80	80-81	81-82
CSUN	220	120	242	266	279	293	308
Delgado	97	220	100	115	132	152	175
Seattle	140	155	160	180	200	220	240
St. Paul	239	250	250	265	281	298	316
TOTALS	696	745	752	826	892	963	1039

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It seems prudent to view future needs from historical perspective. Summary statements regarding funding patterns in the past for these four programs follow:

1.0 CSUN. For the time period 1964-1974, CSUN received funding from a variety of sources including private contributions, case service monies and a State Vocational Rehabilitation Staffing Facilities grant.

2.0 Delgado College. For the time period 1968-1973, Delgado College received $150,000 per year under joint funding from BEH and RSA. For the time period of June 1, 1973 - February 1976, Delgado College received no federal support.

3.0 Seattle Community College. For the time period 1969 - 1974, Seattle Community College received $150,000 per year under joint funding from BEH and RSA, except for the last year when RSA reduced by $8,000 their share of funding. For the time period June 1, 1974 - Dec. 31, 1974, Seattle Community College received $109,046 from BEH.

4.0 St. Paul Technical Vocational Institute. For the time period 1969 - 1974, St. Paul TVI received $150,000 per year under joint funding from BEH and RSA, except for the last year when RSA reduced by $8,000 their share of funding. For the time period June 1, 1974 - Dec. 31, 1974, St. Paul TVI received $80,178 from BEH.

Funding patterns for these four programs changed January 1, 1975, as a result of Section 625. Chart II shows funding patterns for 1975-77.

Chart II

Program	FY 75 Funding	FY 76 Funding	FY 77 Funding	Population Served
California State University at Northridge	$200,000	$318,205	$318,205	Deaf
Seattle Central Community College	175,000	250,000	250,000	Deaf
St. Paul Technical Vocational Institute	200,000	281,746	281,746	Deaf
Delgado College		218,606	218,606	Deaf
TOTAL	$57[illegible],000	$1,068,557	$1,068,557	

It is critical to note that prior to the establishment of NTID and the Regional Education Programs, deaf persons in America had essentially one educational choice for post-secondary education...Gallaudet College. This meant that less than ten per cent of Deaf Americans had the opportunity for post-secondary education.

In 1977, with the Regional Education Programs, NTID and Gallaudet College, at least several experts agree that 80-90% of qualified deaf secondary school graduates have the opportunity for post-secondary education. The Regional Education Programs are comprised of a technical vocational institute, a junior college, a community college and a university. The Regional Education Programs offer post-secondary education options and alternatives.

The Congress passed Section 625 in 1974 recognizing the multi-regional commitment of the Regional Education Programs. There is no funding mechanism other than the kind afforded by Section 625 that makes possible the continuance of Regional Education Programs.

The Regional Education approach to providing post-secondary education opportunities for deaf persons is the Supportive Service Model. The Supportive Service Model is comprised of special staff that functions within existing post-secondary institutions that historically served only hearing students. In brief, the Supportive Model is comprised of specially trained staff that offer the following kinds of services:

1. Preparatory Program/Orientation. This staff works with deaf students in well identified areas that prepare deaf students for integrated education on a competitive basis.
2. Counseling. The staff works with deaf students in areas including career counseling, personal adjustment, housing, relationships with vocational rehabilitation agencies, admissions, job placement and follow-up.

3. Interpreting. The majority of deaf students in Regional Education Programs are "regular" or integrated students. For example, at St. Paul TVI, on any given day there are typically 25-30 Preparatory students, and one hundred plus "regular" students. Regular students utilize interpreters. The number of deaf students studying as regular or integrated students is in direct ratio to the number of interpreters available. The availability of interpreters is a critical variable to the total number of deaf students that can be served.
4. Note-taking. Note-takers are hearing persons who utilize specialized note-books and self-carbon paper for the purpose of providing deaf students with class note.
5. Auditory Training. Auditory training is provided for deaf students to optimize use of residual hearing, to assist with speech production and to optimize lip-reading capabilities.
6. Tutoring. Tutors provide one-to-one or small group specialized instruction to assist the deaf student(s) in maintaining the competitive pace of post-secondary education in a hearing environment.

There are other components to the Supportive Service Model. These include interpreter training components, specialized secretarial staff, specialized media, sign language instructors, extra-curricular activities programs, evaluation components, research, advisory committees, extension and/or continuing education programs and serving as an information center on deafness. It should be noted that integration of deaf students demands daily attention to the breaking down of attitudinal barriers.

Funding for Regional Education Programs is primarily for staff that provide the Supportive Service Model. Only a small percentage of funding is for attendant program costs of supplies, equipment, telephone, travel, and the like.

Since the inception, the Regional Education Programs have demonstrated controlled, orderly growth in relationship to the demand for services. Staff additions that have been made, have been made in direct relationship to student need and demand.

Emphasis has been on the quality of programs which is reflected in the ninety plus per cent success rate of deaf graduates gaining employment or continuing education opportunities. We are keenly aware of the concept of critical mass which dictates that student-staff ratios must be maintained in order to assure quality. Attention is paid to the cost-effectiveness of the Regional Education Programs. For the 1976-77 school year, in excess of 696 deaf students will have full access to these four campuses at a cost to the Federal Government of $1,068,557. Simple division of numbers of students served by the Federal dollar investment approximates $1,535 per student. This indeed is cost effective.

Efforts to improve cost effectiveness are an ongoing activity. The Regional Education Programs are further mindful of cost-effectiveness in terms of how many dollars deaf graduates return to society. Vice President Mondale visited St. Paul TVI when he was a member of the Senate. He read a statement we had prepared that indicated that the initial 225 deaf graduates had paid Federal income tax dollars on earnings that were $89,800 over and above the Federal funds that had been awarded to St. Paul TVI to provide training for deaf students. The Vice President observed that the $89,800 would increase geometrically with every passing year since the initial graduates continue to be employed and new graduates are joining the work force on a regular basis, thus increasing the tax-paying base.

The intent of the Regional Education Programs is to continue the controlled, orderly growth of the provision of post-secondary education for deaf persons. The Congress and the Bureau of Education for the Handicapped have provided leadership and funding that have created educational opportunity for deaf persons. The Regional Education Programs seek continuing support that will permit further controlled, orderly growth as reflected by students to be served in Chart I.

This statement has attempted to demonstrate several historical perspectives and to illustrate the cost-effectiveness of Regional Education Programs.

A five year student projection has been presented which reflects minimum capacity enrollments we feel we can serve in the next five years. Inherent in the projected numbers of anticipated students to be served are staff - student ratios that must be maintained to continue quality education.

In preparing the five year projections you requested, we have attempted to build in modest increases of students, as well as funding, over the next five years which will permit controlled and orderly growth in direct relationship to the demand for services.

The goals set forth are minimums. We can easily serve more if funds are available. The goals reflect a commitment to the basic ingredients of quality post-secondary education for deaf persons.

Supplemental Statement on the Role of Educational Interpreters in Relationship to P.L. 94-142

Senator Randolph raised several positive questions about the role of the Educational Interpreter in relationship to P.L. 94-142. The following statement is offered as one response to these queries. The statement is not intended to be definitive, but rather to be considered as information for further discussion, and hopefully to serve as one spring board for definition and clarification of the role of the educational interpreter.

The National Registry of Interpreters for the Deaf (RID) is the only national organization designed specifically for interpreters. The RID provides an evaluation process leading to certification for its membership. The evaluations are conducted by local/state chapters with certification by the national organization. The RID seeks to establish levels of competence for the entire spectrum of Interpreting needs for deaf people including needs in the area of rehabilitation, law, mental health, health, religious, education and all other areas of human concern. Recently the RID has begun to offer certification in specialized areas such as Law.

RID has been in existence since 1964. The RID initially received Federal funding from the Rehabilitation Services Administration. In recent years, the RID has sought funding from other sources without great success. The search for funding continues today.

There are 2,600 members of RID. As of today, there are 1,163 certified Interpreters. Several states such as Connecticut and Georgia offer a certification process independent of RID.

The membership of 2,600 of RID and the certified interpreters numbering 1,163 do not present a true picture of the state of the art of Interpreting. Many of these Interpreters, both members and certified Interpreters, are unavailable for interpreting because they hold full-time positions in education, rehabilitation and allied fields, or because they are deaf themselves. There are also individuals that provide Interpreting services that do not hold RID membership or certification.

The Rehabilitation Services Administration recognized the chronic shortage of Interpreters in 1972 by establishing the National Interpreter Training Consortium (NITC). The NITC is comprised of California State University at Northridge (CSUN), Gallaudet College, New York University, St. Paul Technical Vocational Institute, University of Arizona and the University of Tennessee.

The objectives of the N.I.T.C. are:

a. To upgrade the skills of persons presently interpreting.

b. To recruit and train as interpreters people who have had little or no previous experience as interpreters.

c. To train a group of interpreters having the special skills necessary to interpret for low-verbal, severely handicapped deaf individuals.

d. To prepare interpreter trainers.

e. To assist state agency personnel and other service workers in understanding the role and function of interpreters and in utilizing available interpreting resources maximally while developing new interpreting resources in each state.

f. To educate deaf people in the utilization of interpreters.

Since inception, the N.I.T.C. has offered hundreds of workshops totaling tens of thousands of hours across the United States in an attempt to alleviate the chronic shortage of Interpreters.

The distinction between the N.I.T.C. and the R.I.D. is clear. The N.I.T.C. is a training body and the R.I.D. is a certifying body. The relationship of these two organizations is similar to Schools of Medicine and the American Medical Association, or Schools of Law and the American Bar Association.

Senator Randolph has wisely asked about the usage of Interpreters in educational settings under provisions of P.L. 94-142. The figures of 2,600 and 1,163 listed above represent primarily the community interpreter, and not the educational interpreter. To my knowledge, there has been no concerted national effort to examine the role of the Interpreter as a part of P.L. 94-142. Only a handful of scattered school districts across the United States are properly utilizing the educational interpreter in K-12 education. Post-secondary education programs such as the Regional Education Programs supported by EHA have been innovators in the use of the Educational Interpreter. Few State Educational Agencies have licensing/certification plans for the Educational Interpreter.

The interest of hearing persons in learning sign language and advancing to Interpreter training in America is a growth phenomena. Minnesota serves as an example. In the time period September, 1976 to February, 1977, a period of 6 months, in excess of one thousand hearing persons have enrolled in Sign Language classes. St. Paul TVI offers summer Interpreter Training Programs. In excess of three hundred applications are on file for fifty training slots for Summer Programs, 1977. The number of persons enrolling in sign language classes has increased every year in the past decade. Interpreter training began in Minnesota in 1972 with increasing rates of application every year. It is the safest of predictions that this high level of interest will continue for years to come.

What is the role of the Educational Interpreter in all educational settings ranging from pre-school to post-secondary education?

Answers to this question are evolving as a result of experience of the Regional Educational Programs. Rather than provide specific answers to this question, it seems preferable to delineate areas for consideration. These areas are:

...there needs to be a national effort to define the role of the educational interpreter with respect to P.L. 94-142.
...State Educational Agencies need to examine the role of the Educational Interpreter in the respective states.
...Local Educational Agencies need to examine the role of the Educational Interpreter in their districts.
...residential schools for the deaf should examine their role, relationship and responsibility towards the educational interpreter.
...programs of Continuing Education for Deaf Adults should make known their needs for educational interpreters.
...the N.I.T.C. has clearly established that interpreters can be recruited, selected and trained to the highest levels of professional competence.

...questions of licensing/certification of the Educational Interpreter need to be answered on a state-by-state basis. Implicit in this process are clarification of the Educational Interpreter's role as part of the Educational Team. Questions of scope of responsibility and pay are part of this area of consideration.

...as the N.I.T.C. trains Interpreters for the field of Rehabilitation, there needs to be a similar body established for the training of Educational Interpreters. The N.I.T.C. has an established record of expertise in the training of Interpreters for Rehabilitation. There is every reason to believe the N.I.T.C. can offer a similar level of expertise for Education. It is suggested that B.E.H. and R.S.A. may wish to enter into a joint training venture for Education and Rehabilitation.

...the supportive service model of Regional Educational Programs of EHA has made it possible for deaf persons to matriculate in post-secondary institutions historically serving hearing persons. This model, including the Educational Interpreter, should be examined for adaptation to the provisions of P.L. 94-142. Additional supportive services as a minimum are counseling, tutoring, notetaking, auditory training, in-service training for regular staff, specialized media and extra-curricular activities.

Senator Randolph asked how many educational interpreters are required in the United States. A query of experts across the country revealed estimates ranging from a low of 1,000 educational interpreters to a high of 10,000 educational interpreters. The concensus felt the need for 4,000 to 6,000 educational interpreters to fill the needs that should evolve from P.L. 94-142, for post-secondary education and for programs of Continuing Education for Deaf Adults. It is suggested that the figure of 4,000 to 6,000 educational interpreters be used as an initial target until such time as experience, data and increased awareness indicate a revision.

In March of 1975, I prepared a paper entitled "Interpreting for Deaf Students: Use of Interpreters in Educational Settings: and Interpreter Training: State of the Art." It is interesting to note that in 1977 this paper, for the most part, is still relatively timely. The paper is attached.

The Sducational Interpreter is one of the newest innovations in the 150 plus years of Education of the Deaf in America.

The first 150 years of Education of the Deaf in America has produced less than satisfactory results.

The success of the Educational Interpreter in post-secondary education is well documented.

K-12 educators have not well documented the use of the Educational Interpreter. Therefore, indicators of success at this level are lacking.

Educational Interpreters are oral/manual. Educational Interpreters do much more than interpret. They tutor, teach, provide models, counsel and in numerous ways support and facilitate the educational process as a part of the special education team.

It is time the Educational Interpreter be recognized. Educational Interpreters may just prove to be that part of the instructional team that will create change in K-12 education that has been elusive for 150 years.

INTERPRETING FOR DEAF STUDENTS: USE OF INTERPRETERS IN EDUCATIONAL SETTINGS: AND INTERPRETER TRAINING: STATE OF THE ART.

Review of the literature, on-site visitations and discussions with numerous individuals throughout the United States indicates that the use of the educational interpreter and the training of interpreters is in the emerging stage of development. There is nothing sacred, nothing etched in stone that relates either to the use of the interpreter in the educational setting or in the training of interpreters.

Historical perspectives. It is difficult to document the first formal use of the interpreter in the educational setting. Empirical evidence indicates that the concept is not new and that interpreters were used sporadically in a variety of educational and on the job work situations since 1915 in Minnesota. One of the first known efforts at providing educational interpreting services in Minnesota is credited to Mrs. Petra F. Howard, former Counselor with the Minnesota State Division of Vocational Rehabilitation. This was a service that was typically provided by Mrs. Howard as part of her work responsibilities. Case records in Vocational Rehabilitation reveal that other selected Counselors provided interpreting services on a sporadic basis to qualified students in private business schools, area vocational technical schools, private trade schools, and universities and colleges. The beginnings of a more formalized service system of interpreting services can be traced to Riverside Community College in Riverside, California in the early 1960's, where a small program for deaf students was initiated. Interpreters were integral to the Riverside program, a service still offered today. From the Community College level interpreting services spread to all levels of education in Southern California, including the provision of services at the pre-school level. This paper will discuss briefly "what is" interpreting at the pre-school level. The formalization of interpreting services occurred at the post-secondary level of education with the initiation of the National Institute for the Deaf in Rochester, New York and the Regional Programs for Deaf students located at Delgado Junior College, New Orleans, Seattle Community College and the St. Paul TVI. These programs began in 1968-69 and continue today. From the post-secondary level, the use of interpreters has flowed downward through the educational system. This flow has been sporadic, initiated on the local level, and has generally taken place in the absence of a master plan. Questions of qualification of interpreters, certification of interpreters, salaries, work scope and job descriptions are only now beginning to be answered.

Interpreter training is not quite as elusive as the use of the educational interpreter. The mid-1960's witnessed a great interest in continuing education among deaf people in the United States. A part of most continuing education programs for deaf people included classes for hearing people in sign language. The interest in continuing education for deaf people waned, but the interest in sign language for hearing people took hold and grew with leaps and bounds.

Today, 1975, continuing education for deaf people is witnessing a renewal of spirit, and the still growing interest on the part of hearing people in learning sign language is being augmented by a higher level of training, that of interpreter training. Gallaudet College, Washington, D. C.; California State University at Northridge; Denver Community College; Eastfield College, Mesquite, Texas; the National Technical Institute for the Deaf; and St. Paul TVI were among some of the first institutions to offer interpreter training for community persons.

Interpreter training was given formal recognition by the Rehabilitation Services Adminsitration, U.S. Department of Health, Education and Welfare, on June 1, 1974, with the initiation and funding of the National Interpreter Training Consortium (NITC). The six members of the NITC are New York University, Gallaudet College, the University of Tennessee, the University of Arizona, California State University at Northridge, and St. Paul TVI. Federal funding for the NITC is envisioned until March 31, 1980. At this time, February, 1975, additional institutions throughout the United States are joining in the interpreter training education including institutions in the states of Ohio, Oregon, Washington, and Wisconsin. It is envisioned that in five years every state will have qualified interpreter trainers as a result of the activities of the NITC.

A Basic Distinction. It is critical to maintain a distinction between the learning of sign language and interpreting.

Failure to maintain this distinction of sign language versus interpreter training is totally counter-productive. Thousands of people across the United States at every educational level are involved in sign language classes on any given day. Only a select few go on to interpreter training. Persons who take one or two basic sign language classes and self-designate themselves as interpreters are much like self-appointed ministers or, less frequently, the self-appointed physician. The distinction is particularly important if interpreters are to develop a professional standard and provide quality services to deaf children, youth and adults.

Questions of Certification. The only certification group for the certification of interpreters is the National Registry of Interpreters for the Deaf (NRID). The NRID provides evaluation materials to state/local chapters, and those local units provide the evaluation that yield certified interpreters. Evaluation procedures leading to certification began several years ago, but were terminated in August, 1974, due to materials that had literally worn out. The NRID, in late 1974, received new funding from the NITC to redevelop evaluation materials. The new materials were released in February, 1975. Two distinct changes in the new materials as compared to the old materials are 1) there will be more of an educational slant to the new materials than previously, and 2) the new procedures permit the category of provisional certification. A salary survey was conducted during 1974 of post-secondary programs for deaf students utilizing interpreters. Of the 29 institutions that responded, only two required RId certification as a requirement for employment. It is the hope of St. Paul TVI that the new evaluation materials will be sufficiently relevant to the educational setting so that NRID certification can be made a requirement for the employment of interpreters. Should the new NRID materials not be sufficiently relevant to educational interpreting, St. Paul TVI is prepared to submit to the State Dept. of Education, Division of Vocational Technical Education a certification plan for the use of interpreters in programs of vocational technical education in Minnesota.

What is Interpreting? In its pure form interpreting is the art of taking spoken language and either interpreting or translating that language into sign language; and conversely, to take sign language and interpret/translate that language into spoken language. There are varying opinions as to the differences between interpreting and translating, and it is not in the scope of this paper to make the distinction. The critical issue is that the interpreter is sufficiently skilled in interpreting and sufficiently sensitive to the language needs of the deaf person/s to make an understandable change of spoken language/sign language without loss of content or thought so that the deaf person participates fully in the activity of communication. It is critical to understand that sign language has undergone vast changes in recent years. It is possible for a skilled interpreter to yield a near perfect signed translation of spoken language. It is also critical to understand that the art of interpreting is not a manual-only activity. Skilled interpreters use lip movements, thus permitting lip-reading by the deaf person. Clearly if the deaf person has any residual hearing, that hearing can utilize a variety of communication modes, including sign languag (and finger-spelling as a part of the signing activity), lip-reading, and the use of any residual hearing. The skilled interpreter possesses a thorough knowledge of all of the sign systems currently available, a knowledge and sensitivity of the educational/medical/psychological/social aspects of deafness, familiarity with the educational content of the material being interpreted, and the ability to relate to a wide variety of publics, including the deaf person, the educational staff with which the deaf student matriculates, and the general public. The interpreter is frequently the on-the-spot expert on deafness.

Interpreting is as variable as children, youth and adults with hearing handicaps. Clearly, the use of an interpreter at the preschool level will be distinctly different from interpreting for a deaf person working on a doctorate in philosophy. At St. Paul TVI since 1969 eleven (11) distinct areas of in-school interpreting have been identified. In addition to these basic distinctions, extra-school interpreting activities expand this listing substantially. Interpreting varies as a function of the children and youth served, the educational environment, and the ability of the interpreter. The precise nature of the work of the interpreter will need to be defined by the employing institution. At the pre-school level and the elementary level of education, the work of the interpreter will necessarily have as a base those job ingredients that are the function of the tutor and/or teacher aide. The important and critical distinction is that the interpreter possesses those skills unique to the intrepreting profession. One clear-cut illustration of the differences between the typical tutor and/or the teacher's aide is that the interpreter can provide a unique service in the normalization mainstreaming efforts for the hearing handicapped child, by being the in-school expert on deafness and communication systems and thereby, serve as a resource to the regular staff and students. Coupled with this the interpreter can and should offer in-service training services directly by teaching sign language classes and coordinating consultative services from community persons who possess areas of expertize beyond the scope of the interpreter. At the secondary level and the post-secondary level of education the interpreter would serve in the same capacities as the interpreter at the pre-school elementary level with the added ingredient of offering more direct interpreting services as the language capabilities of the hearing impaired students permit. Again, it is critical to point out that the work and functioning of the interpreter extends far beyond a "manual" approach. Perhaps some of the most important functions lie in providing direct assistance in the normalization process for the hearing impaired student/s.

The educational interpreter ideally should be a full-time, or near full-time person, as contrasted to the intinerant tutor and/or teacher. Itinerant services provided by the interpreter hopefully would not be considered part of the interpreter's job function, except in extreme cases. The rationale for this approach is that the interpreter should function fully as a member of the instructional/counseling team found in the school situation. The instructional/counseling team specifically includes not only the special education staff, but the staff of the school at large. If the interpreter and instructional/counseling team functions as a segregated unit within a school system, the normalization process is sorely sacrificed. Dr. Edwin Martin, Commissioner, Bureau of Education for the Handicapped, recently stated that the largest barriers to the normalization of the handicapped child are found not in architectural barriers, but attitudinal barriers on the part of fellow students and, in particular, administration. The visibility provided for deafness by the educational interpreter lessens these barriers. Obviously, the administrator/s of the special program for deaf students must be committed to the use of the educational interpreter and insure that the educational interpreter is performing in a manner best suited to the school environment. The educational interpreter must be included as an integral member of the total instructional staff.

Interpreter Training. The profession of interpreter training is only now beginning to merge. The National Interpreter Training Consortium (NITC) is pioneering in the area of interpreter training. The NITC has as top priorities, the recruitment and selection of interpreter training candidates. In the past, deaf persons were forced to take any interpreter that happened to be available because of the extreme shortage of qualified interpreters. This activity contributed to the deaf person's past status as a second class citizen. The NITC is actively engaged in developing and adapting instruments that are predictive in nature and can point to those persons who have the potential for becoming good interpreters. Previous attempts at predictive behaviors for interpreter training were pioneered by the University of Illinois and New York University.

An additional top priority of the NITC is in the development of appropriate curricula materials for use in the training of interpreters. The six members of the consortium working both independently and in concert are rapidly developing materials that are appropriate for the training of interpreters. Curricula development is a never ending process; yet, by the summer of 1975, there will be a uniform set of curricula to be used across the United states that will provide uniformity in the training of interpreters. Evaluation and follow-up, coupled with strong programs for in-service training are additional priorities of the NITC.

Educational Interpreters in Other Settings. It is being demonstrated daily at St. Paul TVI, that skilled educational interpreters can function in a variety of settings. Within past months TVI interpreters have been called on to interpret in the following settings:

1) State Legislative Hearings
2) Criminal Court, Hennepin County
3) Minnesota Commission on the Handicapped
4) Mayor's Committee, Minneapolis
5) Sex Education, Minneapolis Hearing Society
6) The University of Wisconsin - Stout

to name but a few.

The major determinant of the successful educational interpreters in other settings is the vote of the consumer....the deaf person. The above listing argues there is considerable carry-over and correlation between interpreting in education, and interpreting in other settings. At the same time the caution is offered that interpreters are bound by a Code of Ethics, and a primary rule is that interpreters must self-judge their individual competency to perform in a given setting.

Summary A new educational specialist, the educational interpreter, has evolved in recent years. As with so many innovations, the educational interpreter has emerged in the absence of any master plan, either on the local, state or national level. Minnesota is in a unique position to bring order to the use of the educational interpreter through the legislative process. The training of educational interpreters is an emerging profession. Once again Minnesota is fortunate to be a part of a national consortium that is totally dedicated to the provision of the highest quality training. The lives of hearing impaired people can be greatly enriched through the total educational process if the concept of the educational interpreter is given the opportunity to grow according to the need under the laws of the state.

Robert R. Lauritsen
St. Paul TVI
March 11, 1975

TESTIMONY
IN
SUPPORT OF THE EXTENSION OF
THE EDUCATION OF THE HANDICAPPED ACT
WITH EMPHASIS ON SECTION 625

SENATE LABOR AND PUBLIC WELFARE COMMITTEE
SUBCOMMITTEE ON THE HANDICAPPED

JENNINGS RANDOLPH
SENATOR, WEST VIRGINIA
CHAIRMAN

I. A CRITICAL NEED

II. HOW PROGRAMS MEET THE OBJECTIVES OF THE LEGISLATION

by

Robert R. Lauritsen, St. Paul Technical Vocational Institute
Ray L. Jones, California State University at Northridge
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February 24, 1977

Education of the Handicapped Act

Section 625

Regional Education Programs for Deaf and Other Handicapped Persons

I. A Critical Need

II. How Programs Meet the Objectives of the Legislation

> *Regional Education Programs for Deaf and Other Handicapped Persons*
>
> *"Sec. 625. (a) The Commissioner is authorized to make grants to or contracts with institutions of higher education, including junior and community colleges, vocational and technical institutions, and other appropriate nonprofit educational agencies for the development and operation of specially designed or modified programs of vocational, technical, post-secondary, or adult education for deaf or other handicapped persons.*
>
> *"(b) In making grants or contracts authorized by this section the Commissioner shall give priority consideration to--*
>
> *"(1) programs serving multistate regions or large population centers;*
>
> *"(2) programs adapting existing programs of vocational, technical, post-secondary, or adult education to the special needs of handicapped persons; and*
>
> *"(3) programs designed to serve areas where a need for such services is clearly demonstrated.*
>
> *"(c) For purposes of this section, the term 'handicapped persons' means persons who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, emotionally disturbed, crippled, or in other ways health impaired and by reason thereof require special education programming and related services."*
>
> *Elementary and Secondary Education Act of 1974*

Legislative history shows that Section 625, Education of the Handicapped Act, Elementary and Secondary Education Act of 1974 called for the support of three Post-Secondary, Regional Education Programs (REP). The initial three programs were the California State University - Northridge (CSUN), Seattle Community College, and the St. Paul (Minnesota) Technical Vocational Institute. Legislative history dealing with appropriations in 1975 identifies Delgado College, New Orleans, as an additional stipulated program. The initial appropriation level was $575,000. Fiscal year 1976 saw an increase to $2,000,000.

Table I displays the funding history of the initial four REP's under Section 625.

Table I

Project	FY 75 Funding	FY 76 Funding	FY 77 Funding	Population Served
California State University at Northridge	$200,000	$318,205	$318,205	Deaf
Seattle Central Community College	175,000	250,000	250,000	Deaf
St. Paul Technical Vocational Institute	200,000	281,746	281,746	Deaf
Delgado College		218,606	218,606	Deaf
TOTAL	$575,000	$1,068,557	$1,068,557	

The legislation specifies eight handicapped populations as eligible to be served by the Regional Education Programs. In excess of one hundred applications and/or inquiries were made to the Bureau of Education for the Handicapped for support under REP. Rigorous review of technical and cost components caused nine projects in addition to the original four to be funded under REP. Appendix A is a listing of these nine additional programs.

It should be noted that for the time period 1968-1974, Delgado College, Seattle Community College and St. Paul Technical Vocational Institute were supported as Research and Demonstration Projects jointly sponsored by the Bureau of Education for the Handicapped and the Rehabilitation Services Administration. For the time period 1964-1974, CSUN received funding from a variety of sources including private contributions, case service monies, and a State Vocational Rehabilitation Staffing Facilities Grant. These Research and Demonstration Projects and CSUN successfully demonstrated that deaf persons could matriculate in post-secondary institutions that historically served hearing populations. The multi-regional deaf populations served by these institutions contraindicated traditional local and regional sources of funding for continuance. The Bureau of Education for the Handicapped worked closely with the Congress in implementing legislation that became Section 625, the Regional Education Programs.

It is appropriate that as the 95th Congress examines the Education of the Handicapped Act, that Section 625 came under rigorous review.

Presenting testimony today are the four original stipulated Regional Education Programs; 1) California State University - Northridge, 2) Delgado College, 3) Seattle Community College, and 4) St. Paul Technical Vocational Institute. Also speaking are program graduates and a hearing parent of deaf students.

This testimony seeks to demonstrate two major points. These are:

I. There is a critical need to review the appropriations to insure that funding levels are consistent with the needs of the populations to be served.

II. Information will be provided that demonstrates how Regional Education Programs are meeting the objectives stated in the legislation.

I. There is a critical need to review the appropriations to insure that funding levels are consistent with the needs of the populations to be served.

1.0 The original four Regional Education Programs taken together serve a national constituency. Deaf students are served from every state and several of the territories. Interestingly, the original four Regional Education Programs represent four different kinds of post-secondary education; a technical vocational institute, a junior college, a community college and a university.

2.0 Previous studies demonstrate that because the Regional Education Programs do serve multi-state, multi-regional areas that traditional local, regional funding sources are not possible. Simply stated, the State of Minnesota will not, nor should not, pay for the cost of educating a student from Pennsylvania. Appendix B is a document entitled "Funding Alternatives for Post-Secondary Education Programs for Deaf Students" and an additional statement on funding presented for Hearings in 1974 on H.R. 14454, The Vocational Education Act.

3.0 The demand for post-secondary education has dramatically increased since the inception of Regional Education Programs in 1968. Previous to 1968, deaf persons had essentially one post-secondary education option available, Gallaudet College. The National Technical Institute for the Deaf, the Regional Education Programs, plus other local-state post-secondary education programs have created an unparelled opportunity for the deaf person to participate in post-secondary education. For the first time in history, deaf people have the opportunity to make multiple application for post-secondary education. Several experts in the area of deafness state that prior to 1968, less than ten per cent of deaf persons sought post-secondary education, while in 1977, an almost complete reversal has taken place with 80-90% of deaf persons seeking post-secondary education.

The 80-90% figure is in keeping with the majority population, and is as it should be.

4.0 The success rate of deaf students in gaining employment equals, and in some instances, exceeds the success rate of hearing persons completing post-secondary education programs. The Regional Education Programs consistently, year-in, year-out, report success rates in excess of ninety per cent.

5.0 The success rate of deaf graduates gaining employment is profit-making, and cost-effective. Studies have been done that show that Federal Income taxes paid on earnings of deaf graduates exceed the Federal dollars provided for training. Appendix C shows one statement from the Congressional Record, October 2, 1974.

6.0 Costs of Regional Education Programs are excess costs over and above normal operating expenses of the host institutions. The combined physical plant costs of the four host institutions exceed $164,000,000. Annual operating budgets of the host institutions exceed $75,000,000. For calendar year 1976, in excess of 620 deaf students had full access to these four campuses at a cost to the Federal Government of $1,068,557. Simple division of numbers of students served by the Federal dollar investment approximates $1,700 per student. This indeed is cost effective.

7.0 The emphasis of the Regional Education Programs are to provide jobs for deaf people, to prevent deaf persons from being on welfare roles, and to minimize under-employment. These emphasis are consistent with the Congressional emphasis on jobs.

8.0 Career opportunities for deaf persons have greatly expanded as a result of Regional Education Programs. Deaf persons have matriculated in ninety-eight courses at the Regional Education Programs. A list of the courses deaf persons have matriculated in is shown in Appendix D.

9.0 Not to be over-looked, or under-emphasized, are the personal-social maturation growth factors students enjoy coupled with increased public awareness of deafness and a greater acceptance of deaf people into mainstream society.

10.0 Federal funding under REP has made it possible for additional funds, and/or programs to be maintained. In the case of St. Paul TVI, the Federal allocation of REP dollars for calendar 1976, was $281,746. This base permitted additional funds to be secured in the amount of $301,260 for a total of $583,006; more than a doubling of financial resources. All of the REP's have secured additional funding for related programs. The funds available through Section 625 provide the base of the pyramid of services available.

11.0 Regional Education Programs serve as a stimulus for other programs to be initiated. Several examples of these are:

11.1 local mental health programs for deaf persons

11.2 improved health delivery systems for deaf people and their families

11.3 unprecedented growth in interpreting services

11.4 telecommunication improvements for deaf persons

11.5 television and tele-typewriter news services for deaf people

11.6 television programming for and about deaf people.

12.0 The Business - Industrial - Banking communities are benefactors of Regional Education Programs. The 3M Company currently has two sign language classes taught in the 3M Home Office. The Federal Reserve Banks have annual Deaf Awareness classes. The Blue Cross Insurance Companies provide a smiliar series. The Target Company, a Minneapolis based National Discount Store, will feature Deaf Employees in its National House Organ this Spring. The IBM Company has assigned staff to CSUN to develop business careers for deaf persons.

13.0 Regional Education Programs in and of themselves create jobs at St. Paul TVI. On any given day, in excess of 45 staff persons are employed on jobs. Similiar statements can be made of all REP's. Included in this number are deaf persons who formerly were under-employed and are now living, working and contributing at a level consistent with their abilities.

14.0 Regional Education Programs stimulate educational change at the K-12 education levels. Several examples include the growing use of Interpreters, more emphasis on counseling, main-streaming techniques such as the note-taker's book, and instruction oriented to preparation for post-secondary education and careers.

15.0 Service clubs throughout the country such as the Lion's, Sertoma, The National Grange, Delta Zeta, Optimists Quota International, University Women, and others have accepted the field of Hearing and Speech as special projects and/or areas of special interest. Regional Education Programs are frequently involved in these clubs and their activities.

16.0 Regional Education Programs are expanding their educational efforts into adult education (specified in the legislation) by initiating programs of Continuing Education for Deaf Adults (CEDA). The CEDA Programs are initial thrusts into the era of the Learning Society; or life-long learning opportunities. The REP's offer strong institutional bases of support for CEDA programs.

17.0 Regional Programs have been at the center of the explosion of services for deaf adults in the last 10 years. Because of this unique regional approach, parity of services for the deaf community is becoming a reality.

18.0 Regional Education Programs offer Consortium Programs of Post-Secondary Education. For example; St. Paul TVI serves students in neighboring schools; Seattle Community College has students on three campuses; and CSUN provides services at the University of Southern California and the University of California at Los Angeles.

19.0 Regional Education Programs offer special programs for professionals in the field such as Counseling Workshops, Job Seeking Skills Media Packages, leadership in Work Evaluation, Studies in Deafness, Interpreter Training, and Sign Language Classes. Especially noteworthy are the National Leadership Training Programs in the area of the Deaf, and the Deaf-Blind at California State University at Northridge.

The above listing of nineteen items are illustrative of factors that emphasize the need for funding levels to be consistent with the needs of the population to be served.

TWO CRITICAL FACTORS MUST BE HIGHLIGHTED. THESE ARE UNDERLINED FOR EMPHASIS.

1. TABLE I SHOWS THAT THE FOUR REGIONAL PROGRAMS ARE OPERATING AT THE SAME FUNDING LEVEL FOR FISCAL YEAR 1977 AS THEY DID FOR FISCAL YEAR 1976. APPROPRIATION RECOMMENDATION FROM OMB TO THE CONGRESS INDICATE NO INCREASE FOR FISCAL YEAR 1978. THE REGIONAL EDUCATION PROGRAMS WILL FACE A SERIOUS INABILITY TO MEET DEMAND FOR SERVICES, AND INDEED WILL BE FORCED TO REDUCE SERVICES UNLESS THE APPROPRIATION LEVEL IS INCREASED.

2. AS NOTED, THE LEGISLATION SPECIFIES EIGHT HANDICAPPED POPULATIONS AS ELIGIBLE TO APPLY FOR SUPPORT. IN EXCESS OF ONE HUNDRED APPLICATIONS/INQUIRIES WERE MADE DURING THE FISCAL YEAR AT THE $2,000,000 APPROPRIATION LEVEL. THE NINE PROGRAMS THAT WERE FUNDED IN ALL LIKELIHOOD FACE INFLATIONARY-GROWTH FACTORS. MORE IMPORTANTLY, IT CAN BE ANTICIPATED THAT THE BUREAU OF EDUCATION FOR THE HANDICAPPED WILL RECEIVE A SUBSTANTIALLY HIGHER NUMBER OF APPLICATIONS/INQUIRIES FOR FISCAL YEAR 1978.

   AS REGIONAL EDUCATION PROGRAMS NOW STAND, THE SUGGESTED OMB APPROPRIATION LEVEL IS NOT ONLY A FREEZE ON GROWTH AND DEVELOPMENT, BUT A SEVERE CUT BACK.

The major thrust of the nineteen examples is an attempt to show that the Regional Education Programs are cost-effective, profit-making, job oriented and offer positive impact throughout society. What was not strongly emphasized was the tremendous impact on the deaf individual's life in terms of self-worth, contribution to society; and equally important the impact of Regional Education Programs on the deaf individual's family, which is primarily a hearing family.

II. *Information will be provided that demonstrates how Regional Education Programs are meeting objectives stated in the legislation.*

The four REP's function in four widely spread geographic locations. Each of the four REP's function in post-secondary education environments that offer differing educational emphasis, i.e.; a technical vocational institute, a junior college, a community college, and a university. Yet, as deaf children are more similiar to hearing children than they are different; so do the REP's have more in common, than they have differences. The separate settings of the REP's demonstrate the ability of specialized REP's to adapt to the home environment or institutional setting. The balance of this testimony deals with the major components that the four REP's employ in making it possible for deaf students to matriculate in post-secondary education institutions that historically served hearing populations.

20.0 Recruitment. Qualified applicants are recruited from every state. Recruitment typically is a two way street. Staff members of the REP's travel to feeder schools presenting their Programs. Conversely, the four REP's receive numerous visitors including prospective students, parents, secondary school personnel, rehabilitation personnel and other referring agents. The REP's serve as major referral centers for deaf people for other post-secondary institutions and community services.

At least two basic axioms function in the recruitment and selection of students. These are:

20.1 Deaf students require at least one of the supportive services offered by the REP's in order to have a successful post-secondary education experience.

20.2 Prospective students must want, need and show potential to profit from post-secondary education.

21.0 Facilitate entrance into post-secondary education. Proper initiation into post-secondary education for deaf students receives major emphasis. Precedents for this emphasis are seen in the Preparatory Program of Gallaudet College and the Vestibule Program of the National Technical Institute for the Deaf. Three of the four REP's maintain Preparatory Programs. The fourth REP (CSUN) places heavy emphasis on facilitating admission and registration processes, and orientation training sessions. Additionally CSUN serves as a major referral source for transfer students with sixty-four per cent of the undergraduate population having had previous post-secondary education in schools across the nation. Several factors that are of importance at the beginning of post-secondary education experiences for deaf students are:

21.1 Adjustment to a hearing environment
21.2 Adjustment to post-secondary education
21.3 Adjustment to independent living
21.4 Selection of major, career areas of study
21.5 Remediation of academic skills

22.0 Support Services. Support services are the crux of facilitating successful post-secondary education experiences for deaf students.

22.1 Interpreting

22.2 Counseling

22.3 Note-taking

22.4 Tutoring

22.5 Auditory Training/Aural Rehabilitation

Each of these Support Services, and particularly Interpreting and Counseling, have been extensively reported in documents to the Bureau of Education for the Handicapped. Interpreting and Counseling also have been the focus of papers prepared for publication in professional journals, and papers presented at a variety of professional meetings across the United States.

23.0 Program Evaluation. The REP's represent a relatively new (less than ten years) model for facilitating successful educational experiences for deaf students in educational environments historically serving hearing students. It is appropriate that rigorous program evaluation be an ongoing process. Program evaluation is both internal and external. Regularly filed reports to the Bureau of Education of the Handicapped facilitate on-going program evaluation.

24.0 Job Placement and Follow-up. The four REP's assume major responsibility in facilitating job placement and follow-up for REP graduates. Job placement of graduates is accomplished several ways including: 1) Placement by REP staff, 2) placement by host institution staff, 3) coordination with vocational rehabilitation agencies, 4) coordination with State Employment Services, 5) coordination with other referral agencies and families. Job seeking skills seminars and training films are conducted for graduates to facilitate the placement process. Dependent upon the geographical location of the graduate and his/her job from the host REP, follow-up services are provided.

25.0 Consortium Programs. The Seattle Community College is comprised of three campuses. St. Paul TVI is one of thirty-three area technical vocational institutes in Minnesota. CSUN is geographically close to USC and UCLA. Seattle, TVI and CSUN provide training opportunities away from the home campus thus offering increased career training opportunities.

26.0 Sign Language Classes. Sign language courses are offered by each of the REP's. The continued and increasing interest on the part of the hearing community in learning sign language is impressive. More than several hundred hearing persons at each of the REP's participate annually in sign language classes. Annually in excess of one thousand people participate in sign language classes offered by the REP's.

27.0 Interpreter Training. Interpreter Training as differentiated from sign language classes is a growth phenomena at each of the REP's. Interpreter training programs offer a ready supply to fulfill interpreter needs at the REP's, in the local communities, and indeed throughout the nation.

28.0 Internships. The REP's provide internship, practicum stations for interpreters, teachers, counselors, social workers, speech pathologists, audiologists, and administrators.

29.0 Technical Assistance. Staff of the REP's are in demand to render technical assistance in educational and rehabilitation settings throughout the nation.

30.0 Special Workshops and Institutes. REP's are natural sites for initiating special workshops and institutes. Interpreter Institutes, Counseling Workshops, Legal Rights Work Evaluation Workshops, Job Placement Workshops are but several examples. Audiences, or participants for these activities fairly represent the education - rehabilitation delivery systems for deaf persons.

31.0 Critical Mass. The REP's offer a "critical mass" of deaf students which permits the maintenance of quality staff and consistent offering of supportive services. Critical mass is defined as a minimum number of students to form a cohesive peer group that permits individual differences to prevail in developing adequate inter-personal relationships within the peer group. The development and confidence of "self" in the peer group yields confidence for individual members to compete adequately in the larger academic and social environment, the hearing environment.

32.0 Student Attrition. Student attrition at each of the REP's is lower than for the host institution. The holding power of deaf students and success in achieving and competing in hearing environments is remarkable.

The preceding thirteen items coupled with the first nineteen items of this testimony are intended to present an overview of the growth and acceptance of Regional Education Programs.

Since the inception of the REP's in the late 1960's, in excess of 2,500 deaf students have been served in the four REP's.

Each REP is a growth program. Each REP serves the local community, the host state, the region, and collectively the United States. Deaf people in America have six major post-secondary education programs that provide consistent education alternatives and options - Gallaudet College, the National Technical Institute for the Deaf, California State University at Northridge, Delgado College, Seattle Community College and St. Paul TVI. Section 625 of the Education of the Handicapped Act has made this possible.

The support of the Congress has made Regional Education Programs possible.

We ask your continuing support.

APPENDICES

APPENDIX A

The Nine REP's Funded Under Section 625 in Addition to the Four Stipulated Programs

APPENDIX B

Funding Alternatives for Post-Secondary Education Programs for Deaf Students

Statement on Funding from Testimony Presented for Hearing in 1974 on H. R. 14454, The Vocational Education Act

APPENDIX C

Self-Supporting Deaf Graduates Make Program for Deaf Students Self-Supporting

APPENDIX D

Unduplicated Courses of Study at Four Regional Education Programs for Deaf Students, February, 1977

APPENDIX A

THE NINE REP'S FUNDED UNDER SECTION 625 IN ADDITION TO THE FOUR STIPULATED PROGRAMS

University of North Dakota	$102,059	Various
San Diego Community College District	56,440	Learning Disabled
New York State University at Buffalo	120,760	Various
Teachers College, Columbia University	124,449	Various
Southern Illinois University	76,730	Various
Oregon College of Education	86,612	Deaf
Metropolitan State College (Denver)	80,270	Mentally Retarded
Queensborough Community College	170,350	Various
Wright State University	113,723	Various
Total =	$931,393	

APPENDIX B

FUNDING ALTERNATIVES FOR POST-SECONDARY EDUCATION PROGRAMS FOR DEAF STUDENTS

The dollar cost for maintaining a post-secondary education program for deaf students in an integrated setting is in excess of $2,000 per student per year. This figure is arrived at by dividing the annual operating budgets for Programs for Deaf Students at St. Paul Technical Vocational Institute and the Seattle Community College by the average daily attendance figure of deaf students. The $2,000-plus figure includes only the cost for supportive services for deaf students in the categories of 1) personnel, 2) equipment, 3) supplies, 4) travel, 5) consultant services, and 6) other expenses.

The $2,000-plus figure does not include basic tuition, room and board, incidental costs and transportation costs incurred by individual students.

Basic tuition monies paid by deaf students are used to defray in part the regular operating budget of the host institutes and is equal to the tuition policies for hearing students. At St. Paul TVI, the tuition figure is $560.00 for 9 months and an additional $130.00 for the 8 week Summer Quarter, for a total of $690.00 per full academic year of study. The actual cost of education per full academic year is approximately $1,700.00. The difference of $1,000.00 is absorbed through St. Paul TVI's system of mil rate taxation, state and foundation aids and reimbursement patterns.

Deaf students on an individual basis may be eligible for room and board monies, incidental monies and transportation through their home office of Vocational Rehabilitation. Typically, individual deaf students will receive a portion, but not all, of these monies from Vocational Rehabilitation to meet individual needs.

Average daily attendance approximates 100 deaf students at St. Paul TVI. Because St. Paul TVI operates on a quarter system, deaf students enter and graduate four times per academic year. Thus, an average daily attendance yields an annual total attendance of approximately 180 deaf students. The $2,000-plus figure, based on an average daily attendance of 100 students, covers 180 deaf students annually.

From June 1, 1969 to May 31, 1974, the excess costs for supportive services for deaf students have been provided through a Research and Demonstration Program co-sponsored by the Bureau of Education for the Handicapped and the Social and Rehabilitation Services, both of the U.S. Department of Health, Education and Welfare. The annual ammount provided from 1969-1973 was $75,000 each by BEH and SRS for a total of $150,000 annually. For the fifth year, 1973-74, SRS reduced its portion by $8,000, to yield a total grant of $142,000.

The annual grant of $150,000 was given to Delgado College, New Orleans, for the time span, June 1, 1968 - May 31, 1973. The annual grant of $150,000 with the fifth year reduction of $142,000 was given to both Seattle Community College and St. Paul TVI for the time span, June 1, 1969 to May 31, 1974.

For the first three years, June 1, 1969 - May 1972, the $150,000 to each Seattle and St. Paul was sufficient to meet the excess cost for deaf students. For the fourth and fifth years, June 1, 1972 - May 31, 1974, the basic grant had to be augmented through other resources by approximately $50,000 per year to maintain the Programs.

A variety of funding alternatives have been explored to continue the St. Paul and Seattle Programs after June 1, 1974. The major funding dilemma is that collectively the St. Paul, Seattle and New Orleans Programs are regional programs serving deaf students from every state and several of the Territories of the United States. The precedent for a national approach to programs for deaf students has been established by Gallaudet College since 1864, and more recently, 1968, by the National Technical Institute for the Deaf.

The Regional Approach to serving deaf students is essential to maintain sufficient numbers of deaf students in each of the Programs to create a critical mass* of deaf students, to maintain a quality staff to provide appropriate supportive services, and to establish a firm funding base for a known number of students annually.

The Regional Programs serving deaf students are essential to maintain the unparelleled post-secondary education access and alternative for deaf people in America. Gallaudet College and NTID typically serve the top 10-15 percent of deaf students in America. The Regional Programs typically serve those deaf students who do not have access to Gallaudet College and NTID.

The balance of this paper will explore the various funding alternatives to maintain the Regional Programs for Deaf Students on and after June 1, 1974.

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* Critical Mass is defined as a minimum number of students to form a cohesive peer group that permits individual differences to prevail in developing adequate inter-personal relationships within the peer group. The development and confidence of "self" in the peer group yields confidence for individual members of the peer group to compete adequately in the larger academic and social environment (the hearing environment). The precise minimum number of like students to form a critical mass will vary from program to program. At TVI and Seattle the critical mass is defined as 100 deaf students.

1. Local (school district, city, county) funding. Unrealistic funding alternative. Neither Seattle nor St. Paul have sufficient numbers of deaf students at the post-secondary level to maintain a minimum Program for Deaf Students. The St. Paul school district has, since 1969, made substantial like and kind contributions in terms of total access to all facilities, supplies and equipment in addition to free use of over 4,000 square feet of space.

2. State funding alternatives. The State of Minnesota and Washington can be expected to pay excess costs for resident students. The percentage and dollar amount will vary from year to year. In approximation, it is anticipated that 25-30 percent of the total budget, or $50,000 to $60,000 can be expected from Minnesota and Washington to pay for resident students. The source of these funds would initially be from the ten percent set aside monies of Vocational Education.

   Special Education monies at this point in time are not possible in most states, including Minnesota since the law provides these monies are for special education students up to high school graduation, or age 21, whichever occurs first.

   Vocational Rehabilitation monies for excess costs are not realistic. Tuition monies where applicable are already provided. Limited grant monies are possible through Vocational Rehabilitation. However, these monies are time-limited, and restricted primarily to start-up programs including innovation, research and expansion grants. These grants, when available, require a distortion of program activities to fit particular grant requirements.

   State Legislative funding. This alternative has not been vigorously pursued because of the residency/non-residency deaf student population. The state legislators are mandated to provide services for state residents, not non-residents.

3. Regional funding alternatives. Regional funding is unrealistic, and for the most part non-existent. Limited monies are granted on short-term basis through some Regional activities. One example would be Sec. 302 Monies of the Vocational Rehabilitation Program. These monies have been interpreted by the Social and Rehabilitation Services as being available for sheltered workshop type programs. Another former possibility were the Trio Programs. These monies in recent years were not available for new programs. The major disadvantage with Regional funding when monies are available is that they are Regional monies, where as the scope of Programs for Deaf Students are multi-regional. Because schools and classes for deaf students at the secondary level have great inconsistency in their graduation classes from year to year, consistent student projection for post-secondary programs from a given region or regions is at best most difficult. Accurate projections from given regions is further compounded by the shift of secondary students from residential school programs to day programs that are proliferating deaf education.

4. Excess-cost chargeback system to referring states. The excess-cost per student would be $2,000-plus per student per full academic year. The basic tuition per full academic year at St. Paul TVI is $690.00. Thus, the full tuition plus excess-cost figure is $2,690.00-plus per full academic year. This figure does not include books, room and board monies, transportation monies or monies for indicental student expenditures.

A charge-back system would be directed to: a) Vocational Rehabilitation, b) Vocational Education or c) Special Education.

a) Vocational Rehabilitation case service funds available to counselors vary from state to state. For fiscal 1971 the national average expenditure was $48,251. Of this amount 57 percent, or $28,493 was expended for training services for individuals. Of this amount the average expenditure for post-secondary training for fiscal 1971 was $400 per client. Because the rehabilitation case service dollars are so severely in demand, it is unlikely that the Vocational Rehabilitation counselor can provide excess costs for Programs for Deaf Students.

b) Each state Vocational Education department has ten percent of its monies designated for handicapped students who are residents of that state. It is highly unlikely that any state would send a portion of the set aside monies out of the state to support deaf students. Token payments from less populous states might possibly be anticipated. However, when a more populous state started sending say, $20,000 to St. Paul or Seattle, an attempt would be made to establish a local program to keep the money in the home state. Basically, the ten percent set aside monies for the handicapped are to be used in the host state.

c) The rules and regulations for special education vary from state to state. In most states special education monies are available for handicapped students through high school graduation or age 21, whichever occurs first. Most handicapped students, including deaf students, receive a token high school diploma of attendance. This procedure qualifies handicapped students and deaf students as high school graduates, thereby removing them from provisions of Special Education statutes. Thus, funds through special education for post-secondary students are severely restricted.

5. Federal Funding Alternatives. Federal funding offers the best philosophical alternative to funding Regional Programs for Deaf Students because of the national coverage these programs offer. Federal funding also appears to be the major alternative in view of the possibilities iterated in preceeding items 1-4. Within the Federal structure explored to date, these seem to be the alternatives:

   5.1 Free-standing legislation. This route seems to offer little or no promise prior to May 31, 1974. The Congress and the Administration are overwhelmed with domestic and foreign matters.

   5.2 Amendments to existing legislation.

      5.2.1 A major hope lies in amending the Vocational Education Act of 1968. Specifically, this Act provides for ten percent of Vocational Education monies to be designated for handicapped students. At the present time these monies are distributed to the states on a formula basis for expenditure within the states. An ideal solution would be to designate or set aside at the Federal level a small percentage of the ten percent set aside monies to be administered directly to several Regional Programs for Deaf Students. The Regional Programs are in the province of Vocational Education. This alternative appears to be thoroughly consistent.

5.2.2 Amending Public Law 89-36, the law that established the National Technical Institute for the Deaf (NTID). Previous discussions have been held with Dr. Robert Frisina, Vice President for NTID on this matter. Such a possibility should not be ruled out. However, such an amendment would place NTID in the position of being a funding agency, which may not be desirable.

5.2.3 Seeking an alliance with Gallaudet College. Discussion has been held with Dr. Merrill, President, about the possibility of an alliance. As with any possible arrangement with NTID, such an alliance would place Gallaudet College in the position of being a funding agency.

5.3 Social and Rehabilitation Services (SRS). Research and Demonstration monies on and after June 1, 1974 are definitely out. Extended discussions have been held with officials of SRS. Section 302 of the Vocational Rehabilitation Act of 1973 initially was thought to hold some promise for funding. However, SRS interpretation of this section indicates that these monies are administered on short time-line grants through regional offices for sheltered workshop activities. Section 304 b, provides for Special Projects and Demonstrations specifically including individuals with spinal cord injuries, older blind individuals, and deaf individuals whose maximum Vocational potential has not been reached. Guidelines for Section 304 b are not complete as of this writing. This section should be monitored to determine applicability to Regional Programs for Deaf Students. Also, the Training Provisions of the Vocational Rehabilitation Act should be explored for applicability.

5.4 National Institute of Education (N.I.E.). Little is known about N.I.E. Reports indicate that N.I.E.'s goals are not consistent with Regional Programs for Deaf Students.

5.5 Bureau of Education for the Handicapped (BEH), U.S. Office of Education. BEH currently supports in part St. Paul TVI and Seattle Community College. This five year support will terminate May 31, 1974. BEH has consistently been an excellent supporter of the Regional Programs. BEH is highly supportive in searching out funding alternatives both within BEH and through other sources for the time period beginning June 1, 1974. Within BEH itself the primary thrusts are strategies for innovation of new educational/research activities. BEH lacks well-developed strategies for continuing successful programs that at inception were innovative. BEH has adopted the Request For Proposal (RFP) format for screening, selecting and awarding grants. The RFP's, covering several major impact educational areas are just beginning to be released. This process will, according to one informant, extend into the next fiscal year. Thus, BEH does offer strong encouragement for continuing support, yet apparently at the present time lacks a clear-cut mechanism for continuance of programs.

5.6 Elementary and Secondary Education Act (ESEA). These monies are typically allocated to the states for state monies and therefore not appropriate for Regional Programs.

5.7 Office of Education generally. Discussions have been held with officials of the Post-Secondary Education Innovative Programs. This fund appears not to be appropriate. Previous discussions were held with officials of the Trio Programs. Budgetary limitations preclude availability of monies.

It may well be that under the reorganization structure (Dec. 1973) of USOE that funding alternatives may emerge. These alternatives need to be investigated.

Summary

As of January 14, 1974, the following alternatives seem possible.

1. Partial funding from the host states, Minnesota and Washington. These monies would primarily be Vocational Education monies to provide in part excess cost funding for state residents only. This option would be precluded if item 2 following is implemented, since illegal co-mingling of Federal and State funds would occur.
2. Federal level. Amend the Vocational Education Act of 1968 to set aside at the Federal level a percentage of the ten percent monies.
3. Federal level. Funding from BEH and/or SRS. Funding from BEH for a part of or the entire Program for Deaf Students through a grant processed competitively as a result of the Request for Proposal (RFP) policy of the Office of Education. Funding from SRS for a part of, or the entire Program for Deaf Students possibly through Sec. 304 b.

This document is an attempt to focus on funding alternatives for Regional Programs for Deaf Students effective June 1, 1974. This document is intended as a spring-board to either implement one, or a combination of the alternatives listed, or perhaps to discover new alternatives.

Robert R. Lauritsen
January 14, 1974

[illegible]

Statement on Funding from Testimony Presented for Hearings in 1974
H. R. 14454, The Vocational Education Act

A Practical View of Funding

The conviction of this testimony is that regional post-secondary programs for deaf students benefit not only Deaf Americans, but the American Society at large. The basic question that has faced the Regional Programs is how shall the Programs be continued? Once again, attachment B presents an analysis of various funding strategies. For purposes of this testimony it seems prudent to highlight several funding factors.

1. The legislative ammendment to the currect ESEA legislation as introduced by Congressman Quie is viewed by Deaf Americans and the Deaf Community as the most significant development to occur in continuing regional post-secondary education programs for deaf students.

2. The Vocational Education ten percent set aside monies for the handicapped as administered by the states have created a dilemma for post-secondary education programs for the deaf. In the case of the State of Minnesota, the judicial use of the ten percent set aside monies allocated on a percentage basis for Minnesota students has permitted the St. Paul TVI program to operate at a level equal to the demand for services. Other states have been less fortunate. In more than several states these ten percent set aside monies have been used as seed money, limited in amount, and issued on a year to year basis. This allocation system has precluded the development of quality programs, based to a large degree on uncertain funding futures. In at least one state a program for deaf students was given the entire state allotment of ten percent monies for the first year of program operation with the assurance that these monies would be diminished each succeeding year. This

program served an all-time high of 108 students during its first year of full funding. For the 1974-75 year this same program, with reduced funding, is struggling to reach an enrollment of 25 deaf students.

The state allocation system dictates that the ten percent monies be used for residents of a given state. The transfer of these monies from one state to another state has been investigated and found to be unworkable. A solution to the use of ten percent set aside monies for regional post-secondary education programs for deaf students would be to set aside at the Federal level a modest percent of monies to be distributed to a few regional key programs.

3. The use of special education monies for deaf students at the post-secondary education level has been investigated. Minnesota is one of several states that permits the use of special education monies for handicapped students until the age of 21 or high school graduation, whichever occurs first. Since virtually all handicapped students, including deaf students "graduate" from high school, the deaf student is effectively severed from special education and funds at the post-secondary level of education.

4. Vocational Rehabilitation monies come to the Regional Programs for Deaf Students. These monies however are primarily for individual student support in payment of basic tuition, books and supplies, and dependent upon a financial needs statement, room and board. The Regional Programs are indebted to the Rehabilitation Services Administration for their fifty percent support costs together with the Bureau of Education for the Handicapped for the first five years of the Research and Demonstration grant of the

Regional Programs. However, on a continuing funding basis apparently the Rehabilitation Services lack a ready source of funding support.

By every known measure the Regional Programs for Deaf Students have apparently been declared successful. In the volatile field of Deaf Education success is difficult to obtain. The remaining hurdle, that of continuing the Regional Programs, is indeed formidable. The pattern of the Federal government in numerous areas of endeavor is to provide seed money to determine the worth of a given program. Once worth, or success is obtained, the Federal government attempts to shift continuing funding to the local or state agency. Involved are numerous questions of state-federal control. The question of control is complex. This basic question, and the manner in which it has been resolved has created either exemplary programs, or a graveyard of white-crosses of successful programs that could have been if..... Deafness has always been elusive; to families, to educators, to physicians, to rehabilitation workers, to legislators, to society at large. This testimony has been an attempt to demonstrate that Deafness need not be elusive. The debilitating effects of deafness can be ameliorated through quality programs. Quality programs can be maintained and developed through the judicial guidance of our Federal Government. I am deeply pleased that the United States House of Representatives, Committee on Education and Labor, General Subcommittee on Education has demonstrated a genuine interest, concern and commitment for a major segment of our American Society, the Deaf American.

APPENDIX C

Self-Supporting Deaf Graduates Make Program for Deaf Students Self-Supporting

Dollar averaging indicates the the earning power of St. Paul TVI's 225 deaf graduates during the first five years equals $3,570,000. This combined figure yields an approximate Federal income tax of $856,800. The total Federal dollar input for this five year period was $767,000. In effect tax dollars returned to the Federal Government were $89,800 more than the Federal investment.

Congressional Record - October 2, 1974

APPENDIX D

UNDUPLICATED COURSES OF STUDY AT FOUR REGIONAL EDUCATION PROGRAMS FOR DEAF STUDENTS, FEBRUARY, 1977

Accounting
*Administrative Supervision
*Aircraft Maintenance Technician
Apparel Arts
Architectural Technology
*Art - General
*Art - Two-Dimensional
*Art - Three-Dimensional
Auto Body Repair
Automotive Mechanics
Baking
*Biology
Boiler Maintenance
Bookkeeping
Bricklaying
Building Maintenance
*Business
Cabinetmaking
Cake Decorating
Carpentry
Chemical Techology
Child Care and Education
*Child Development
Civil Engineering
Commerical Art
*Communicative Disorder
*Computer Science
Construction Drafting
Cosmetology
Custom Apparel and Fashion Design
Data Processing
Dental Laboratory Technology
Design Technology
Diesel Mechanics
Dry Cleaning
Electro Mechanical Technology
Electrical Engineering Technology
*Elementary Education
*Engineering
*English
Farm Management
*Finance
Flower Arranging
Food and Home Management
*Geography
Graphic Arts
*Guidance
Health Occupations
*Health Science
Highway Technology
*History
*Home Economics
Horticulture
Hotel and Restaurant Cooking
Industrial Electronics
Industrial Hydraulics
Inhalation Therapy
*Journalism
Keypunch
Landscape Technology
*Liberal Studies
Library Technology
Machine Tool Processes
*Math
Meat Cutting
Mechanical Engineering Technology
Medical Laboratory Assistant
Mental Health Technician
Micro-Precision Instrumentation
Nurses Aide
Office Practice, General
Optical Technology
Orthotics and Prosthetics
Painting and Decorating
Petroleum Engineering Technology
Phototgraphy
*Physical Education
Plumbing
*Political Science
Poodle Groomer
Practical Nursing
*Psychology
*Recreation
Recreational Technology
Secretarial, General
Sheetmetal
Small Appliance Repair
Small Gas Engine Repair
*Sociology
*Special Education
Technical Illustration
*Theater
Tool and Die
Traffic Transportation
Truck Mechanics
Upholstery
Watchmaking
Welding

*These courses are Bachelor or Master degree level classes.

Some non-asterick courses are college transfer courses.

Senator **Randolph**. Would you give your name, Mr. Perry, and the organization you represent. We see that you are accompanied by others. They can give their names at the time that they are to testify or you can make mention now of their names.

STATEMENT OF HAROLD PERRY, PRESIDENT, THE COUNCIL FOR EXCEPTIONAL CHILDREN

Mr. **Perry**. Mr. Chairman, members of the Subcommittee on the Handicapped. I am Harold Perry of the Council for Exceptional Children.

Senator **Randolph**. Let me ask you if you are going to read all of this statement?

Mr. **Perry**. Absolutely not.

Senator **Randolph**. Fine. It is a good statement, and it will be made a part of our record. If you would highlight the main points for us.

Mr. **Perry**. First, may I say, Senator, that it is indeed a privilege and a pleasure for a practitioner, a public school person, who has been at it for over 25 years, to have an opportunity to come into our Nation's Capitol and also hear comments from you, Senator, because back home many times we wonder just how much the people here in Washington know about handicapped kids. So you have really given me hope this morning just by sitting and listening to your comments earlier. Thank you for it, and I can go back home now and say, gee, they do know something about handicapped kids and more especially about the future.

May I say one thing? I read yesterday that the difference between a statesman and a politician is that the statesman is concerned about the next generation and the politician is concerned about the next election, and obviously, sir, you are a statesman.

If you will forgive me, I have just a few words I would like to read, if I may, and if our statement can be entered into the record, I would like to highlight some of the major parts.

As you well know, Mr. Chairman, being yourself among its primary architects, we now have firmly placed in the statute books Public Law 94–142, the Education for All Handicapped Children Act. This is to us the bright future for handicapped kids, something that those of us who are practitioners have been looking forward to for many years.

We are presently serving about 16,000 youngsters in our own school system. We are very proud of them. We are not proud of the fact we have over 1,700 other youngsters identified as handicapped and gifted whom we cannot serve at this time due to lack of funds.

Senator **Randolph**. What area are you speaking of so the record may indicate it?

Mr. **Perry**. Memphis, Tenn., in the categories of mentally retarded, severely handicapped and gifted. In point of fact, in all of the categories.

We, too, have a program for the deaf, serving approximately 200 youngsters. Fortunately, I can boast here and say we do not have a waiting list, but we do have 1,700 youngsters who have been identified as needing services which we cannot provide due to the lack of funds, and also due to the lack of trained personnel.

May I state, too, for the record, that we are most pleased that President Carter has added on his own endorsement to Public Law 94–142 and his commitment to carry out that law.

We are not here today to speak to Public Law 94–142 as such other than to suggest that we need to give the act time to work. We know that there are those, including CEC, that could suggest amendments, but we urge that such amendments not be considered until there is enough experience to truly be able to separate rhetoric from real problems.

If I may move to the issue of personnel development. The special education manpower development component (part D) of the Education of the Handicapped Act, has been, in our estimation, a highly successful Federal support program. As you know, this component provides financial assistance through grants to institutions of higher education, State education agencies, and other nonprofit agencies.

I would like to bring to your attention the fact that we feel in public school education much needs to be done in the area of in-service training, especially as that in-service training relates to the general education teacher. If we are to mainstream handicapped and gifted youngsters, we need to help the general education teacher not only accept the responsibility but, more specifically, to learn to work with these youngsters in the mainstream.

The Council perceives the following state of affairs in the late 1970's:

Continuing personnel shortages in certain critical areas which is really threefold: Shortages in disability areas (such as instruction of the severely handicapped and the seriously emotionally disturbed); shortages in certain geographic areas; and shortages in certain program areas, such as vocational education of handicapped persons.

Personnel surpluses in certain disability areas (such as may be the case in some instances in instruction of the mildly retarded) as well as personnel surpluses in certain geographic areas.

A massive need for inservice training of both general and special education personnel.

We have difficulty and it is nearly impossible to find teachers trained in the area of the deaf-blind. There are personnel surpluses in certain disability areas, such as in the area of the mentally retarded. We would strongly urge that consideration be given to strong support within teacher training institutions for a noncategoried training program, in other words, especially not training teachers for a category of handicapped, but covering several different handicaps in their training program. But again, let me reemphasize, there are massive needs for inservice training of both general and special education personnel.

Parenthetically, let me emphasize that we are not talking just of teachers, general and special education teachers, but we are also talking about the administrators and public school principals and the supportive personnel in the area of education, who must be in the position to support the work with handicapped children.

I recently attended a meeting of the National Association of School Psychologists and Elementary School Principals. They both are asking, how do we bring this about? What is our role in the business of mainstreaming the handicapped kids?

In a report to the Congress entitled "Training Educators for the Handicapped: A Need to Redirect Federal Programs," the GAO submitted these basic observations: And I will mention one or two briefly.

The majority of handicapped students spend most of their school day in regular classrooms, yet regular classroom teachers generally have not received training in the skills needed to effectively teach them.

Handicapped students vitally need vocational instruction, yet they are intentionally excluded from the schools' vocational training programs by teachers untrained in methods for teaching the handicapped.

I, too, in my nearly 30 years of experience in working with handicapped and gifted kids could cite cases where youngsters who were not supposed to achieve have achieved given the opportunity.

The GAO further observed that HEW's programs for preparing teachers have primarily been directed to stimulating growth in the capacity of colleges to prepare specialists for educating the handicapped; and, giving financial support to college students going into the field of special education.

Then another aspect of training relates to paraprofessionals. We must emphasize the need for applying individualized instruction techniques to the handicapped by supporting projects—such as those for preparing and using paraprofessionals—designed to extend the regular classroom teacher's ability to reach individual students.

Ocer the past several years, we have gone to great extent to recruit and train paraprofessionals. We have also a program we have adopted called the "Bucket Brigade," which goes out and recruits volunteers from the community to help with handicapped and gifted youngsters. There is much that can be done in this area on the local level if the opportunity were afforded.

While we find the GAO's basic assessment of personnel needs in the education systems accurate and the GAO's recommendations generally worthy of attention, we find the criticism of the Bureau of Education for the Handicapped quite unfair, especially in light of their projected directions in disbursement of funds under EHA part D. In evidence of the growing BEH priority for in-service training of both regular and special education personnel, we submit their own fiscal 1977 and projected fiscal year 1978 funding allocation charts.

Parenthetically, the GAO itself acknowledged in the aforementioned report that its criticisms might be largely out of date. The GAO acknowledged that, if successfully implemented; action taken by the Bureau of Education for the Handicapped since GAO's fieldwork was completed should greatly improve the special project program.

U.S.O.E.-BEH is indeed moving to "greatly improve the special project program," and officials of the Bureau are to be complimented for the incremental revision of funding priorities.

We would therefore recommend, Mr. Chairman, that the statutes governing part D be made more flexible in order to meet the very immediate as well as future personnel needs. We would more specifically further recommend that the statutes be so designed as to allow for three basic missions in the coming years:

1. The continual upgrading of competencies for both general and special education personnel;
2. Targeting on critical shortages in the preservice training of personnel;
3. The pursuit of better training models for the future.

I might add here that we find many, many school systems about the country, many, many teachers, many, many teacher training institutions, who have very little awareness and knowledge in relation to individual educational programs for youngsters.

May we say that the last mission cited is no small matter. While we are focusing on the closing of gaps under the pressure of very critical and immediate needs, we must not "give up" the future. We must continue to explore challenging and innovative new training mechanisms and techniques.

The Council firmly believes that the EHA legislative authorities for research and development must be revised where necessary to assist in the achievement of two overriding objectives:

1. The maintenance of a long-term programmatic capacity, and
2. Provision of a more flexible base for ongoing problem solving.

I am going to just call your attention in the report to one piece of equipment that I know my visually limited coworkers in our system are quite excited about. One of my consultants is a blind man working with teachers and with youngsters who are limited, both blind and partially seeing, and all they can talk about in the last few months has been the Kurzweil reading machine. It is a machine that speaks the pages of books, magazines, newspapers, typewritten letters, and similar materials at the synthesized human speech rate of 200 words per minute, spelling or repeating if the user desires. In other words, this is a machine that will bring light in the life of many blind people, and I just hope that this is the beginning of many, many other technological inovations for these people.

I am going now to move to something that does apply to me personally, again being a public school person, and that is an issue of needed research—we feel that much more attention should be given to the research capacity of local school districts.

I saw a sign on someone's desk, "The buck stops here." For the public school principal's office, that is where the buck stops. That is where the parent and the child wind up. I think we have great capacity, we have the skills, we have the personnel to carry out and carry on and come up with some very meaningful research if we do it day by day, living and working with youngsters—no disrespect intended to anyone else within these other great institutions.

Again, as the good Senator said, there are many things in our testimony that you can read. I won't insult your intelligence by going over them in detail. I would like though to call attention to the Council's recommendations with respect to the future of the model programs within EHA, namely that they be combined into one component of model programs with one fiscal authorization to be the EHA model demonstration program, with the current four target earmarks being dropped.

We would further recommend that such a combined model program be instead earmarked for funding into the following thirds:

One-third for preschool—from age zero—model projects.

One-third for school-age model projects.

One-third for post-school-age model projects.

May I add on that last point that there is a great deal of emphasis being given today to post-school programs in terms of adult education for the handicapped. In fact, we are providing new programs for the adult blind that 5 years ago we did not provide programs, for instance, which people who have lost their sight and who need to come back now to school for mobility training so they can learn now how to cook and sew and wash and iron.

We believe that such a three-way division by Congress would provide sufficient comparability to the existing four separate authorities to allow continuity of programing where appropriate, while at the same time providing for a new flexibility to meet other target areas.

I will conclude with an issue of interest to a great many people. On page 12 we discuss the special educational needs of gifted and talented children. On October 6, 1971, then U.S. Commissioner of Education Sidney Marland submitted his nationwide assessment regarding the status of gifted and talented education to the Congress. Among his more salient findings, the Commissioner discovered that:

One. Only a relatively small percentage of the Nation's 1.5 to 2.5 million gifted and talented children were actually benefiting from existing educational services.

Two. Gifted educational services had a low priority at virtually all levels of government and school administration.

Three. Very little was actually being accomplished in the field of gifted and talented education because of more pressing funding priorities, more threatening crises, and the absence of adequately trained personnel.

If I may inject a personal note, I heard just a few months ago one of our State lawmakers make reference to the fact that we didn't need to provide funds for the gifted because they can take care of themselves. That is rather a sad note.

I want to skip to the recommendations, if I may.

We believe, Mr. Chairman, that it is time for the Congress to clearly signal this priority, and we therefore recommend the following legislative action:

That the current Federal definition—EHA, part A, section 602—of handicapped children for educational purposes be changed to a definition of "exceptional children" and that gifted and talented children be included in that revised definition.

Such a definitional arrangement already exists in a number of States.

That the current Bureau of Education for the Handicapped within the Office of Education be redesignated as the "Bureau of Education for Exceptional Persons," with a clear understanding that gifted and talented children are a priority target population of that redesignated bureau.

That, wherever appropriate, the Commissioner-discretionary programs—EHA, parts C through G—administered by the current BEH be expanded to include gifted and talented children as an eligible target population along with handicapped children.

That authorization levels for EHA parts C through G be appropriately raised to conformed to this enlarged mission on behalf of all exceptional children.

Mr. Chairman, without going into great detail at this juncture, we would like to observe that the proposed enlargement of the exceptional child base is by no means revolutionary. Many States already have such a base, either in statutes or in practice. Moreover, in the special education profession there exists a long established common base of expertise with respect to the whole spectrum of exceptionality, handicapped children, and gifted and talented children.

Mr. Chairman, permit me a further personal observation. As educators for many years we have been guilty. We have been talking about individual differences; and yet designing programs and trying to find children that fit these programs. But today we are saying something differently. We are really saying the same thing again but doing something about it. Today we are taking the individual child and trying to assess his needs and provide those experiences that are most meaningful for the children regardless of their problems, regardless of their exceptionalities. And you and I both know that all children are special. They all have the same basic needs and all have the same basic desire for love, success and belonging. So if you understand children there is not that great a gap except in some isolated instances.

Mr. Chairman, we again thank you for the opportunity given the Council to appear today on behalf of exceptional Americans. In closing, may we simply reiterate that we stand prepared to make the full resources of the Council for Exceptional Children available to this subcommittee as it fulfills its legislative charge with respect to reauthorization of the Education of the Handicapped Act.

In closing, I realize that I have forgotten to introduce for the record Mr. William C. Geer, the Executive Director, The Council for Exceptional Children, and Frederick J. Weintraub, Assistant Executive Director for Governmental Relations, The Council for Exceptional Children.

Again, I can't leave without saying I, too, personally have gained a great deal from you, from my presence this morning, from listening to the good Senator comment, and from the other Senators as I heard the testimony relating to the deaf.

Thank you.

Mrs. FORSYTHE. Thank you, Mr. Perry. I am sorry Senator Randolph had to step out for a few minutes. He will be back shortly.

He has some questions we can start with. Hobbs defined exceptional as handicapped, emotionally disturbed, and those known as juvenile delinquents. Can you give us your reaction to that kind of definition?

Mr. PERRY. Maybe my definition is too broad. I will share mine, and if these two distinguished gentlemen wish to take me apart they can do so.

An exceptional child to me is any child who has difficulty or is unable to compete and conform within his environment. Any child who either chronically or acutely has difficulty manipulating and relating to his present environment. Perhaps an example would be a child who is on a homebound program because of a broken leg and is unable to walk. This is a handicapped child, but he is not a chronically handicapped child.

Mr. WEINTRAUB. We have not traditionally had problems with the existing Federal definition of handicapped children. We think the important aspect beyond the list of disabilities is the provision that says "who by reason thereof requires special education and related services." Certainly not every child who has a disability is handicapped in the sense of requiring special education and related service.

We, in terms of our request that an exceptional child definition be used, would see no reason why the present definition of handicapped children if it were to also include gifted and talented would not be sufficient as a definition. I don't think there would be any need to revamp massively the present definition of handicapped children.

Senator RANDOLPH. I am afraid I had to step out for a moment. I regret it. I had to talk to some West Virginians who are here. It was the only possible time I could. You always want to talk to West Virginians.

Mr. GEER. I understand the Senator wants to meet his constituents when they appear.

I would like to make a statement on defining exceptional children. I believe the reference to the Hobbs definition was relative to the Nicholas Hobbs study with respect to the classification of children, is that correct, in which Dr. Hobbs did not address gifted children because his HEW contract did not call for that.

Historically, back to at least 1922, when the Council for Exceptional Children was founded, children who deviate sufficiently from what is considered to be average so that they require special education provisions in order to reach their full potential have been considered exceptional children. Quite naturally, this includes all of the areas of handicapping conditions that we have included, and it also includes a large segment of children who have remarkably high intelligence and talents and who because of benign neglect fail to get an adequate education that would make them the greatest contributors to this society as well as the most satisfied persons themselves.

Our Government did, Congress did in the 1950's, produce some legislation that was intended to change that, the National Defense Education Act. Many of the programs were designed to train highly gifted persons to train other highly gifted persons and so on.

Now, that emphasis has slackened severely and the Marland report did point out the neglect that continues for that group of persons. It is amazing to see the stimulation that is taking place across the country with regard to the education of the gifted now that the Federal role has been reestablished as a real entity.

I talked with one state supervisor yesterday from the State of Georgia, who reported more than 360 teachers of gifted children are now working in that State, and in fact, a total increase in all of the areas of programing.

The definition that we propose would simply give these kids a place in the Federal target population for all exceptional children, which they rightfully deserve and would establish clearly that they need an administrative niche in the Federal Government that will last, that they will not be pushed around from pillar to post as they have been for the last 25 years, and will become in their own right recipients of appropriate educational measures.

Senator RANDOLPH. Our problem now comes down to a lack of time with the witnesses and commitments we have. We may have questions, but we will give those in writing to you.

We do appreciate your knowledge and the way in which you present that knowledge based on experience. I think the proclivity to act that is being shown now is much greater than in past years. We know that there are jobs to be done, and better ways sometimes to prepare people to do those jobs. It is very important that we act in these areas.

Thank you very much.

[The prepared statement of Mr. Perry follows:]

STATEMENT OF

THE COUNCIL FOR EXCEPTIONAL CHILDREN

to the

SUBCOMMITTEE ON THE HANDICAPPED

of

THE SENATE HUMAN RESOURCES COMMITTEE

with respect to

EXTENSION OF THE EDUCATION OF THE HANDICAPPED ACT
(S.725)

February 24, 1977

Presented by:
Harold Perry, President, The Council for Exceptional Children

Accompanied by:
William C. Geer, Executive Director, The Council for Exceptional Children
Frederick J. Weintraub, Assistant Executive Director for Governmental Relations, The Council for Exceptional Children

Mr. Chairman, Members of the Subcommittee on the Handicapped:

I am Harold Perry of The Council for Exceptional Children, and I am also the Director of the Special Education Division of the Memphis City Schools. Accompanying me today are William C. Geer, CEC's Executive Director, and Frederick J. Weintraub, Assistant Executive Director for Governmental Relations.

We thank you for the opportunity to appear before this distinguished panel of the Senate Human Resources Committee to offer the views and the recommendations of The Council for Exceptional Children during these important deliberations regarding reauthorization of the Education of the Handicapped Act. May we also take this opportunity to express again to you, Mr. Chairman, the continuing admiration, and warm appreciation of the membership of the Council for your unrelenting efforts on behalf of America's exceptional children.

As you know, Mr. Chairman, The Council for Exceptional Children is a national organization with a membership of approximately 70,000 professionals in the field of special education. One of the most fundamental ongoing missions of the Council, which has brought us to Capitol Hill on so many occasions through the years, is to seek continual improvement of Federal provisions for the education of America's exceptional children and youth, both handicapped and gifted.

Initially, Mr. Chairman, we wish to utilize this occasion to express our basic endorsement of S.725, your bill proposing extension of the Education of the Handicapped Act through 1982. Our comments today are directed at raising issues for your consideration. We are not prepared at this time to offer specific legislative language, but will do so at a later date.

Overall Objectives

As you well know, Mr. Chairman, being yourself among its primary architects, we now have firmly placed in the statute books P.L. 94-142, the Education for All Handicapped Children Act, which landmark legislation embodies the major features of the overall Federal commitment to its handicapped children in both fundamental areas of rights and fiscal commitment. P.L. 94-142 clearly sets forth the permanent goal for the Federal financial contribution and equally clearly sets forth those educational rights guarantees that must be adhered to by the States and their intermediate and local school districts.

Parenthetically, we are most pleased that President Carter has added his own endorsement to that overwhelming endorsement of P.L. 94-142 witnessed in the vote of approval in the Congress itself. In the August issue, 1976, of Exceptional Parent, now-President Carter had this to say:

> I will implement the Education for All Handicapped Children Act (Public Law 94-142) as swiftly as possible, to insure that all the children in this nation can receive a high quality public education. I believe that this is an important and worthwhile use of our limited public funds. We must attempt to enable all of our people to reach their full human potential.

It is apparent to all, some year and one quarter after enactment, and most especially to those who are at the front-line of instruction -- namely, the personnel in our school systems -- that those EHA components other than Part B of the EHA must be strengthened in every way practical and appropriate to support the basic mission of P.L. 94-142. We endorse that concept, and offer our thoughts toward achieving that objective. At the same time, while supporting whatever redirection of EHA Parts C through E may be required to meet the rather immediate needs attendant to P.L. 94-142, we will at the same time encourage a proper balance so that these other EHA programs may also continue to enrich long-term, future instructional and related needs in the education of exceptional children.

Personnel Development

The special education manpower development component (Part D) of the Education of the Handicapped Act, has been, in our estimation, a highly successful Federal support program. As you know, this component provides financial assistance through grants to institutions of higher education, State education agencies, and other nonprofit agencies.

We do not belong to that school of thought which would massively alter this component. Rather, we believe that it is necessary to examine areas of need in 1977 with a view to revising the Part D statute so that it may better support current and future, rather than past requirements.

The Council perceives the following state of affairs in the late 1970's:

- continuing personnel shortages in certain critical areas which is really threefold: shortages in disability areas (such as instruction of the severely handicapped and the seriously emotionally disturbed); shortages in certain geographic areas; and shortages in certain program areas, such as vocational education of handicapped persons.

- personnel surpluses in certain disability areas (such as may be the case in some instances in instruction of the mildly retarded) as well as personnel surpluses in certain geographic areas.

- a massive need for inservice training of both general and special education personnel.

With respect primarily to that third issue of inservice, we believe it appropriate to give attention, though qualified and cautious attention, to a recent U. S. General Accounting Office study on manpower needs and how they are being met.

In a report to the Congress entitled "Training Educators for the Handicapped: A Need to Redirect Federal Programs," the GAO submitted these basic observations:

- The majority of handicapped students spend most of their schoolday in regular classrooms, yet regular classroom teachers generally have not received training in the skills needed to effectively teach them.

- Handicapped students vitally need vocational instruction, yet they are intentially excluded from the schools' vocational training programs by teachers untrained in methods for teaching the handicapped.

The GAO further observed that HEW's programs for preparing teachers have primarily been directed to:

- stimulating growth in the capacity of colleges to prepare specialists for educating the handicapped; and,

- giving financial support to college students going into the field of special education.

The report concludes with the following recommendations to the Secretary of Health, Education, and Welfare:

- Provide a major emphasis on programs for training the Nation's regular classroom teachers to effectively deal with the handicapped, in cooperation with State and local education agencies and institutions of higher education.

- Discourage the use of Bureau of Education for the Handicapped funds for paying stipends for full-time students, except where such stipends are deemed essential and other sources of student assistance are not available.

- Emphasize the need for applying individualized instruction techniques to the handicapped by supporting projects -- such as those for preparing and using paraprofessionals -- designed to extend the regular classroom teacher's ability to reach individual students.

- Develop and implement a plan to provide vocational educators with the skills and abilities needed to effectively deal with the handicapped in the regular classroom.

While we find the GAO's basic assessment of personnel needs in the education systems accurate and the GAO's recommendations generally worthy of attention, we find the criticism of the Bureau of Education for the Handicapped quite unfair, especially in light of their projected directions in disbursement of funds under EHA Part D. In evidence of the growing BEH priority for inservice training of both regular and special education personnel, we submit their own fiscal 1977 and projected fiscal 1978 funding allocation charts. (Appendix A)

Parenthetically, the GAO itself acknowledged in the aforementioned report that its criticisms might be largely out of date:

> However, if successfully implemented, action taken by the Bureau of Education for the Handicapped since GAO's fieldwork was completed should greatly improve the special project program.

U. S. O. E. - BEH is indeed moving to "greatly improve the special project program," and officials at the Bureau are to be complimented for the incremental revision of funding priorities.

Nonetheless, along with the GAO's assessment of need and its recommendations, another reason exists for drawing attention to their report. The GAO offers us an important reminder, namely, that EHA, Part D, was never intended to be a basic support mechanism for the higher education systems. Part D is intended to train personnel, wherever such training is neede .

We would therefore recommend, Mr. Chairman, that the statutes governing Part D be made more flexible in order to meet the very immediate as well as future personnel needs. We would more specifically further recommend that the statutes be so designed as to allow for three basic missions in the coming years:

- the continual upgrading of competencies for both general and special education personnel;

- targeting on critical shortages in the preservice training of personnel;

- the pursuit of better training models for the future.

May we say, Mr. Chairman, that the last mission cited is no small matter. While we are focusing on the closing of gaps under the pressure of very critical and immediate needs, we must not "give up" the future. We must continue to explore challenging and innovative new training mechanisms and techniques.

Research and Development

The Council firmly believes that the EHA legislative authorities for research and development must be revised where necessary to assist in the achievement of two overriding objectives:

1) the maintenance of a long term programmatic capacity

2) and provision of a more flexible base for on-going problem solving.

By long-term programmatic capacity we mean that the Bureau of Education for the Handicapped should be able on a planned sequenced basis to support research on improvement of education of exceptional children. Such research cannot be slipshod nor should it necessarily be subject to problems of the immediate. It requires national planning and coordination. Therefore, we support the continuation of BEH controlling the use of such funds through the present "Request for Proposals" approach. We are particularly concerned that attention be given to the following programmatic issues; improving instructional methodology, policy research and technology.

While all of the above are equally important, we would like to highlight the need to do something to improve our exceedingly fragile link-up with technology. As a Nation we will probably be remembered for a number of characteristics, but one of those characteristics will certainly be our engineering and technological capacity. We at the Council grow increasingly concerned that the still incredible pace of technological innovation and improvement is not interfaced in any organized, consistent, and comprehensive manner to assist exceptional persons across a broad range of possibilities, for examples -- the amelioration of handicapping conditions and assistance in instruction.

Let us take an example of what we ought to be seeing a great deal more of in applied technology in the years to come, again taken from BEH-supported projects.

National attention has been given of late to the Kurzweil Reading Machine, invented by Raymond Kurzweil of Cambridge, Massachusetts.

The Kurzweil Reading Machine speaks the pages of books, magazines, newspapers, typewritten letters, and similar materials at the synthesized human speech rate of 200 words per minute, spelling or repeating if the user desires.

This electronic breakthrough gives the visually impaired or blind almost unlimited access to all printed material. Easy to operate, the machine automatically starts speaking after the user places the paper with print face down on a glass plate, and presses a button. A major feature of Kurzweil's system is that it can distinguish a variety of type fonts, and actually "learn" new ones from a computer program.

In essence, this is the problem, Mr. Chairman: too often we wait for a dedicated researcher or scientist to come knocking at the Federal door with a good idea. The statutes must encourage a permanent link-up with the scientific and technological community in order to at least reduce the number of what have certainly been too many lost opportunities for applied technology to the benefit of exceptional persons.

In addition to programmatic research the research authority needs to clearly provide the capacity to engage in practical short term as well as long term problem solving at all levels of the educational systems. In that same context, we must break loose from the increasing procedural policy of permitting the basis for research to flow from one direction only, that is, the Federal direction. More pointedly, forcing practically everything into the "RFP only" procedural mold is stifling creativity. Put bluntly, we require a parallel mechanism for invitations to do research which says, in effect, "We will receive applications for your ideas."

It has been our experience that preparing oneself to accept the need for the aforementioned flexibility requires a broadening of one's "mind set" on who should be doing practical research. The capacity and the need to do research does not reside simply in the universities and the large "think tank" firms. For example, we must be more attentive to the research capacity of local school districts.

The Demonstration Projects

For all practical purposes, all of the following existing EHA components were at least intended to be model demonstration projects, rather than direct service components:

- the special program for children with specific learning disabilities (EHA, Part G)
- the early childhood program (EHA, Part C)
- the severely handicapped projects (EHA, Part C)
- the regional, vocational, adult, and postsecondary programs (EHA, Part C).

First proposition: Demonstration projects too often end up being in reality, direct service projects - frankly, because of the need. However, children with specific learning disabilities should now receive the appropriate instruction they require through the assistance of the larger EHA Part B as revised by P.L. 94-142. Correspondingly, the new preschool incentive component of the same P.L. 94-142 should now be perceived as the legitimate direct service support mechanism for early childhood developmental programs, and should not, in effect, be forced to compete for appropriations with the older early childhood "models."

Second proposition: We still require, however, and perhaps always will find the need for, model demonstration instructional projects. As examples, we perceive a notable paucity of much needed model development activity for the seriously emotionally disturbed, the multi-handicapped, and for programs for children below the age of three.

Third proposition: The best mechanism for meeting the demonstration requirements of 1977 and the more distant future would be a flexible Federal demonstration authority, without the current, in effect exclusionary, earmarks.

The Council therefore recommends that:

1. The components cited at the beginning of this segment be combined into one component and one fiscal authorization as the EHA Model Demonstration program, with the current four target earmarks being dropped.

2. Such a combined model program be instead earmarked for funding into the following thirds:
   - one-third for preschool (from age zero) model projects
   - one-third for school-age model projects
   - one-third for post-school age model projects

We believe that such a three-way division by the Congress would provide sufficient comparability to the existing four separate authorities to allow continuity of programming where appropriate, while at the same time providing for a new flexibility to meet other target areas.

P.L. 89-313 (as amended by P.L. 93-380), Aid to State Supported Schools and Institutions

We feel obligated to touch upon the long-standing (since the mid 1960's) setaside within Title I of the Elementary and Secondary Education Act for supplemental educational assistance to handicapped children in State operated or otherwise supported facilities, originally authorized as a "naturally growing" entitlement in P.L. 89-313.

Until appropriations action taken last year by the 94th Congress in response to P.L. 94-142, the "89-313" program had actually been our largest fiscal direct support program at the Federal level for the education of handicapped children. It is our understanding that actual allocation for the coming school year (1977-78) for this program will be approximately $122 million and may in fact reach $145 million in school year 1978-79.

We are not prepared at this time, Mr. Chairman, to offer specific recommendations with respect to the future of this setaside. Frankly, we find the situation problematic from a money perspective. We would favor phasing this program into the larger P.L. 94-142 if there were a way to fiscally protect 89-313 counted and served children. However, at the current level of EHA Part B appropriations ($315 million for fiscal 1978) we generate an approximate $50 per child, while under the projected allocation for P.L. 89-313 we may soon have $400-plus per child.

There are undoubtedly problems attendant to this program, to cite but one -- its immense complex administrative procedure. While 89-313 is not part of the bill under consideration, The Council urges the subcommittee to undertake totally candid and hopefully exhaustive discussion of this program before the Congress considers its reauthorization when ESEA is considered. Parenthetically, we wish to congratulate the Congress for having taken one more step toward a more rational use of Federal dollars by abolishing last year the prohibition against the mingling of EHA Part B and P.L. 89-313 funds when appropriate to provide the best programs for children.

Other ESEA Authorities

Mr. Chairman, we wish to allude to other programs within the overall Elementary and Secondary Education Act for purposes of discussing the interaction of all HEW-based Federal programs impacting upon the education of exceptional persons.

For instance, we have the 15 percent setaside for handicapped children in each State allocation under ESEA Title IV, Part C, Educational Innovation and Support. Moreover, P.L. 93-380 (Title VI, Part A, Section 603) amended the Adult Education Act in such a manner as to provide that not more than 20 percent of the funds under the Adult Education Act can be applied to educational programs for institutionalized persons. Finally, under the ESEA program of School Assistance in Federally Affected Areas (Impact Aid) the same P.L. 93-380 provides that, for the purpose of computing the amount to which a local educational system is entitled, the Commissioner shall count as one-and-one-half any child who is handicapped if that child is the dependent of a member of the U.S. Armed Services.

Regardless of the specific purpose of any of a number of worthy authorities within the ESEA for the education of exceptional children as well as other HEW programs impacting upon that education, the cornerstone, the basic mission around which all other components must gravitate is P.L. 94-142, the Education of All Handicapped Children Act.

Mr. Chairman, P.L. 94-142 could provide a unique opportunity to begin to better coordinate the complex of Federal services impacting upon exceptional children. This law has a clear mission: that all handicapped children be provided a free appropriate public education by September 1, 1978.

This Act, which is critically important if we are going to insure that handicapped children receive an education, is going to require increased State and local dollar commitments in addition to increased Federal commitments. However, as one looks at the services required, there are many existing Federal laws that could be of assistance to State and local communities trying to comply with P.L. 94-142. For example, P.L. 94-142 requires each State to establish a system for locating and evaluating handicapped children. P.L. 92-603 provides for early periodic screening, diagnosis and testing (EPSDT). This law administered by the Social Rehabilitation Services Administration could provide financial, professional and technical assistance to State education agencies trying to carry out P.L. 94-142. However, because they are separate laws and administered by separate agencies, the likelihood of a cooperative effort is negligible. P.L. 94-142 requires and provides special incentives to provide education to preschool handicapped children. Head Start has special earmarked funds and a mandate to serve handicapped children, but so far it has been almost impossible to get Head Start and State education agencies to plan together.

Lack of coordination provides a disincentive for carrying out public policy. For example, P.L. 94-142 requires that handicapped children in State schools and instiutions be provided an education. There has been a growing trend to change the character of State institutions from being purely custodial to becoming developmental centers. P.L. 94-142 is consistent with that objective. However, the Medicaid program, which supports much of the cost of State institutions, requires certain staff ratios in their regulations. Educators are not permitted to be counted because the regulations were designed by health professionals. Therefore, institutions who want to hire teachers to teach kids are forced to hire nurses so that they can retain their Medicaid support. Thus, they may find themselves caught in the situation of having to decide which Federal law to violate. That decision will be made on the basis of which provides greater funds rather than what is in the best interest of the children they serve.

We therefore recommend that the Congress order an HEW-wide study of all programs impacting upon exceptional children with at least the following objectives:

- How can all programs regardless of whether they are specifically addressed to the handicapped better assist in achieving the basic mission of P.L. 94-142?
- What aspects of programs, regulations, etc. interfere with the achievement of that mission?
- What statutory, regulatory, and administrative changes are required to guarantee that all appropriate programs are serving the basic mission of P.L. 94-142?

Gifted and Talented Children

On October 6, 1971, then U.S. Commissioner of Education, Sidney Marland submitted his nationwide assessment regarding the status of gifted and talented education to the Congress. Among his more salient findings, the Commissioner discovered that: 1) only a relatively small percentage of the nation's 1.5 to 2.5 million gifted and talented children were actually benefitting from existing educational services; 2) gifted educational services had a low priority at virtually all levels of government and school administration; and 3) very little was actually being accomplished in the field of gifted and talented education because of more pressing funding priorities, more threatening crises, and the absence of adequately trained personnel.

Conclusions regarding the use and impact of Federal assistance to stimulate the development of new programs were equally depressing. The study found, for example, that less than 15 percent of the States were spending any of their Title I funds to identify or to develop special programs to meet the needs of gifted and talented youngsters from deprived areas. In addition, it discovered that only 20 percent of the States had used Title III monies for programs or services directed at the gifted and talented and that only nine of the States had utilized Title V monies to strengthen their programs for these students.

The implications extrapolated from the Marland Report were clear -- efforts to stimulate the development of gifted and talented programs through the use of unspecified Federal appropriations were not directly benefitting gifted children.

A modest but significant step toward initiating a real Federal presence in this area was taken by the Congress with the creation of a program of gifted and talented educational support in P.L. 93-380, Section 404, Special Projects. This authority was initiated by the Senate, and we again congratulate the chief sponsor of this important breakthrough, the distinguished Senator from New York, Mr. Jacob Javits.

But some six years after the Marland report to the Congress we have still not acknowledged that the special educational needs of this group of vulnerable children - truly handicapped when they fail to receive appropriate special instruction suited to their unique needs and their unique potentials - is also a necessary National, and therefore Federal, priority.

We believe, Mr. Chairman, that it is time for the Congress to clearly signal this priority, and we therefore recommend the following legislative action:

- That the current Federal definition (EHA, Part A, Section 602) of handicapped children for educational purposes be changed to a definition of "exceptional children," and that gifted and talented children be included in that revised definition.
- That the current Bureau of Education for the Handicapped within the Office of Education be redesignated as the "Bureau of Education for Exceptional Persons," with a clear understanding that gifted and talented children are a priority target population of that redesignated bureau.
- That, wherever appropriate, the Commissioner-discretionary programs (EHA, Parts C through G) by the current BEH be expanded to include gifted and talented children as an eligible target population along with handicapped children.
- That the current ESEA Title IV, Section 404, be abolished as well as the current Office of Gifted and Talented within BEH, since they would no longer be necessary because of the proposed enlarged scope of the BEH program.
- That authorization levels for EHA Parts C through G be appropriately raised to conform to this enlarged mission on behalf of all exceptional children.

Mr. Chairman, without going into great detail at this juncture, we would like to observe that the proposed enlargement of the exceptional child base is by no means revolutionary. Many States already have such a base, either in statutes or in practice.

Moreover, in the special education profession there exists a long established common base of expertise with respect to the whole spectrum of exceptionality, handicapped children and gifted and talented children.

Mr. Chairman, we again thank you for the opportunity given the Council to appear today on behalf of exceptional Americans. In closing, may we simply reiterate that we stand prepared to make the full resouces of the Council for Exceptional Children available to this Subcommittee as it fulfills its legislative charge with respect to reauthorization of the Education of the Handicapped Act.

FY 1977 Funds Distribution
(School year 1977-78)
(Dollars in Thousands)

	Pre-Service		In-Service		All	
	Amount	Trained	Amount	Trained	Amount	Trained
1. Preparation of Special Educators						
a. Early childhood..................	$4,400	1,375	$1,820	2,800	$ 6,220	4,175
b. Severely handicapped................	7,300	2,281	2,140	3,290	9,440	5,571
c. Paraprofessional.............	1,000	666	300	460	1,300	1,126
d. Physical education.............	750	234	280	430	1,030	664
e. Recreation.............	700	218	250	384	950	602
f. Interdisciplinary................	450	214	180	276	630	490
g. General special education.............	8,750	2,734	1,730	2,660	10,480	5,394
h. Vocational/career education.............	1,000	312	600	930	1,600	1,242
Subtotal.............	$24,350	8,034	$7,300	11,230	$31,650	19,264
2. Special Education Training for Regular Education Teachers 1/	$ 3,550	---	$6,125	15,313	$ 9,675	15,313
3. Instructional Models						
a. Developmental Assistance............	NA	NA	$ 400	600	$ 400	600
b. Model implementation.............	$ 3,000	937	$ 650	1,083	$ 3,650	2,020
c. Volunteer program......	---	---	---	---	---	---
Subtotal.............	$ 3,000	937	$1,050	1,683	$4,050	2,620
Total	$30,900	8,971	$14,475	28,226	$45,375	37,197

1/ Direct financial assistance related to the pre-service training of regular classroom teachers is not provided Regular classroom teachers receiving in-service training are allowed up to $15 per diem when training is held at a site away from the school.

FY 1978 Funds Distribution
(School year 1978-79)
(Dollars in Thousands)

	Pre-Service		In-Service		All	
	Amount	Trained	Amount	Trained	Amount	Trained
1. Preparation of Special Educators						
a. Early childhood	$ 3,732	1,166	$ 2,488	3,828	$ 6,220	4,994
b. Severely handicapped	5,664	1,770	3,776	6,743	9,440	8,513
c. Paraprofessional	814	543	1,221	1,878	2,035	2,421
d. Physical education	678	212	452	695	1,130	907
e. Recreation	618	193	412	634	1,030	827
f. Interdisciplinary	522	249	348	535	870	784
g. General special education	5,082	1,588	3,388	6,050	8,470	7,638
h. Vocational/career education	1,467	458	978	1,505	2,445	1,963
Subtotal	$18,577	6,179	$13,063	21,868	$31,640	28,047
2. Special Education Training for Regular Education Teachers 1/	$ 3,420	---	$ 5,130	12,825	$ 8,550	12,825
3. Instructional Models						
a. Developmental Assistance	NA	NA	$ 970	589	$ 970	589
b. Model implementation	$ 2,130	666	1,420	2,367	3,550	3,033
c. Volunteer program	266	177	399	614	665	791
Subtotal	$ 2,396	843	$ 2,789	3,570	$ 5,185	4,413
Total	$24,393	7,022	$20,982	38,263	$45,375	45,285

1/ Direct financial assistance related to the pre-service training of regular classroom teachers is not provided. Regular classroom teachers receiving in-service training are allowed up to $15 per diem when training is held at a site away from the school.

Senator Randolph's Questions to Harold Perry With Responses

1.) What do you see as the Federal role in developing technical aids and devices that can assist handicapped persons?

Answer: As referred to in our testimony, the Federal government should provide the necessary link-up between those engaged in technological development and handicapped citizens. We require a linkup that will encourage an automatic question with respect to every technological breakthrough: "How can this be applied to assisting handicapped Americans?", just as in space research we are constantly looking to the positive by-products in human health and weather control.

2.) You state that the Bureau of Education for the Handicapped should pay stipends only when absolutely essential. Can you expand on those circumstances where stipends might be considered absolutely essential?

Answer: Yes. Where there are continuing personnel shortages in certain critical areas, whether disability areas, geographic areas, or program areas, and where it is difficult to attract personnel into training for these areas, stipends might indeed be allowed as a source of entrance-level incentive.

3.) You mention the need to train regular classroom teachers to meet the needs of handicapped children under their care. Do you have any estimate of the number needing such training? Should training paraprofessionals be a priority?

Answer: With respect to the second question, training paraprofessionals should certainly be one among many priorities. With respect to the first question, inservice training of regular education personnel should be education-system wide and addressed to varying levels of need-to-know:

- Certainly all educators, at all levels, should have a basic understanding of exceptional children and a basic understanding of special education.
- Teachers and related personnel must have at least the minimum competencies essential to accomplishing the individualized written program for each child as mandated in P.L. 94-142.
- All administrators must know their duties, must understand the basics of special education, must know something about the diagnostic range of exceptional children, and must understand the instructional service components that we characterize as special education and related services.

Senator **Randolph**. Senator Eagleton, of our subcommittee, is chairing a subcommittee of the Appropriations Committee, and he has to stay there, but he did want to express his appreciation for your being present, and perhaps he will pop in at any moment.

Mr. Hall, if you will identify yourself for the record.

STATEMENT OF LEONARD HALL, STATE BOARD OF EDUCATION, STATE OF MISSOURI

Mr. **Hall**. My name is Leonard Hall. I am representing the State of Missouri and its State Board of Education as assistant commissioner for the division of special education.

Off the record, when I testify back in Missouri before a general assembly, I stand, and that gives me a good exit.

I appreciate your permitting me to sit and visit with you in a more relaxed atmosphere.

Senator **Randolph**. Do you mean all witnesses before committees in Missouri stand?

Mr. **Hall**. We figure because of our $650 million budget it gives us a quick exit to the door if they don't like our figures.

Senator, as the assistant commissioner for special education, I am responsible for a number of programs for the handicapped. Those programs include the section of special education which provides regulatory and leadership service to 570 school districts serving some 166,000 handicapped children.

In addition, we have the school for the deaf, with approximately 400 children, and the school for the blind, with approximately 200 children.

Senator **Randolph**. Are they at separate locations?

Mr. **Hall**. Yes, sir.

And 62 day schools for the severely and multiple handicapped, serving in excess of 3,000 children. The service provided by that network is a result of our comprehensive State special education mandate, which I had the privilege of helping author and now have the privilege of being the chief administrator. I say that not to give myself credit but to be presumptuous enough to try to identify with you as one of the authors of the Federal efforts toward that same goal. As the author and deliverer of services at the State level, I have very real concerns about how we will be able to interact with the Federal mandates as brought forth in Public Law 94-142 and also related statutes such as section 504 of the Rehabilitation Act of 1973.

Now, I am in a precarious position, Senator, because as the chief administrator for the handicapped, I need to also serve as the chief advocate. I would implore you and members of the committee to review the testimony which I have submitted and not to take my remarks as being a concern that my job becomes more difficult, but instead understand that, from my point of view, my effectiveness may be greatly limited, and there could be a deleterious effect on our ability to provide services because of conflicts between the State and Federal mandates.

For example, Public Law 94-142 is a permissive statute, yet the regulations promulgated to interpret section 504 of the Rehabilitation Act are so closely intertwined that in effect to be in compliance with the Civil Rights Act—for which we have no objection, of course—effectively makes us required to be in compliance with Public Law 94–142. Thus it is not a permissive statute. To be in compliance with the Federal law, we would need to violate State law and State constitutional prohibitions related to the issue of separation of church and State as we now read the law and the regulations, and relative due process.

We have a due process procedure in Missouri, which our courts have upheld as being a fair and reasonable system. It does not follow the same procedures as to due process as set forth in Public Law 94–142.

The gentleman from CEC said, "Let's separate the fact from the rhetoric." From my experience with the State law, you have got to live with it and really see just what the problems are, but I would suggest to Congress that you study the implications that the procedural specificity of the Federal law has on States which also have comprehensive special education mandates, and if, in fact, the States can provide satisfactory evidence that they do have statute and regulatory language speaking to the same basic prohibitions of advocacy, service and protection, which you so properly mandated in Public Law 94–142, that the burden of proof be shared by both the U.S. Office of Education and the State departments of education as to whether or not those State procedures in fact address the same goal.

For example, in Missouri we have statutory language speaking to a full services goal. The target date has since passed. In Missouri we do have a comprehensive State mandated system. We have a comprehensive mandated individual special educational requirement. We have all of the provisions of service and advocacy and protection in the State law as found in the Federal law but procedurally they are different, as they would be among all States.

The Bureau for Education of the Handicapped at this time, has no flexibility in accepting our contention that our procedures address the congressional mandate. Would I be too presumptuous to suggest that if in fact my contention is correct, that the Congress include within their report, language on the extension of the Education of Handicapped Act a discussion of the possible exemption of States from the procedural specificity of Public Law 94–142, when that State can show satisfactory evidence that State procedures, although not following the same process, will provide the same protection, service, or advocacy.

That would give the States the right to negotiate with the Federal Government on those issues and still not hurt the child. Otherwise I have a good question as to whether or not the Missouri State plan can be approved because of that issue and because of the constitutional prohibition of separation of church and State.

Perhaps Congress also would want to consider the possibility, if in fact you wish not to consider State constitutional prohibitions, of providing the same bypass provision you did in title I ESEA to let money flow into the State indirectly when the State office cannot directly accept it because of the prohibitions it has.

With due respect to the Senator and committee, I offer those suggestions for consideration.

I would want to advise for the record that in my testimony which has been previously submitted there has been attached resolutions signed by no fewer than 10 advocacy groups in Missouri, including the Missouri Federation Council for Exceptional Children, Missouri Speech and Hearing Association, The Missouri Association for Children with Training Disabilities, United Cerebral Palsy Association of Missouri, Missouri Association of School Administrators, Missouri Parents of Deaf/Blind Children, Missouri Association of School Administrators, State Advisory Council on Mental Retardation and Developmental Disabilities.

These groups to whom you are the benefactor and I am the deliverer have supported my contention that Missouri is addressing Missouri's priorities in a systematic and responsive manner, and that they support our efforts, and hopefully that will lead to credibility in offering you some alternatives for us to participate effectively in Public Law 94–142, and reconsideration of section 504, in that participation could be voluntary.

Thank you.

Senator RANDOLPH. Mr. Hall, it is good that you are doing what you are doing because we need the counseling. We need to know of problems in Missouri or some other area of the country, and we welcome your bringing this particular matter to our attention.

We are going to have some questions and we will make your responses a part of the record. I think that is the best way to proceed, unless you feel, Pat, that we should go ahead at this moment. What do you think about it? Do you have some questions you would like to ask now?

If Public Law 94–142 were not to be amended, how would Missouri proceed with its compliance?

Mr. HALL. Senator, as we have studied the law, and upon the advice of our legal counsel, Public Law 94–142 as it is presently written and as the regulations are presently discussed, would not permit Missouri to be in compliance without violating the State constitutional and statutory provisions. It is quite likely then that the whole issue of our participation would be a moot issue. Yet if section 504 regulations are signed and become effective, we would then be in violation of the Civil Rights Act, because the regulations are so closely intertwined, and we would have the Office of Civil Rights coming in after us, and the Bureau of the Handicapped wanting to know why we weren't participating, but we couldn't get our plan approved without making promises of violating State law.

Senator RANDOLPH. I think we want to develop questions for you.

Mr. HALL. I will be pleased to help in any way I can.

Senator RANDOLPH. In this general area. I can assure you problems will not be overlooked. We will want to address these matters. We will do it very carefully with your help as well as Senator Eagleton's. His interest is known, the members of his staff are knowledgeable about these problems, and we will work with his office on this situation.

Mr. HALL. May I say finally, Senator, to you and to the subcommittee and the committee as a whole, on behalf of the children and parents of the children in Missouri. I wish to commend you for your concern for the handicapped, and I implore you not to retreat from your mandate or from your commitment, and we will stand ready to work with you in implementing that mandate and that commitment.

Senator RANDOLPH. Thank you. You have been very helpful. Thank you.

[The prepared statement of Mr. Hall along with additional material supplied for the record follows:]

TESTIMONY PRESENTED TO THE U. S. SENATE SUBCOMMITTEE ON THE HANDICAPPED
February 24, 1977

Mr. Chairman and Members of the Committee:

My name is Leonard Hall representing the State of Missouri and its State Board of Education as Assistant Commissioner for the Division of Special Education. I very much appreciate the opportunity afforded me to testify before this Subcommittee today, and I wish to offer the following information to the Committee with reference to the implications of the federal special education effort including PL 94-142 and related statutes upon the special education programs in Missouri.

First, let me mention that the Congress is to be commended for its commitment to participate in the development of improved special education services throughout the nation. Certainly since 1970 there has been an unprecedented awareness and interest in the special learning needs of the handicapped child. Missouri, like most states, had previous to PL 94-142 implemented comprehensive special education legislation at the state level, such legislation including the full services goal and individual educational programming requirements as are found in PL 94-142. In fact, Missouri's comprehensive law contains every provision of protection, service and advocacy as is found in the federal statute. However, the procedures and processes among states differ as a function of the unique makeup of each state's educational and governmental system. Regardless, the full services goal is clearly the end result as it is in Missouri.

It is Missouri's view that the federal government must reassess the propriety of its intervention into the state responsibility of providing public education and recognize its role with the state and local educational systems to be one of participation, innovation and support. As such, the federal government should set forth those principles necessary to assure equal protection for the handicapped child under the provisions of the United States Constitution and the federal government should then hold each state accountable to devise its policies and procedures under state law to achieve that mandate. The imposition of federal legislation and regulations as procedurally specific as PL 94-142 infringes upon the rights of the state educational, legislative and judicial systems and presents a very real administrative dilemma to Missouri. The state departments of education and local school districts find themselves responsible for the administration of sets of regulations which are in conflict or differ in procedural direction but which address the common full services goal.

One example of this is the issue of due process which is found in both Missouri's state special education law and the federal law. The systems outlined in the respective statutes conflict, yet both provide for the parent or guardian of the child a systematic procedure by which their rights can be exercised. Another example is the disregard by the federal government of the state constitutional prohibition of spending public funds in programs of a sectarian purpose.

Attached are copies of resolutions signed by respective administrative and advocacy groups in Missouri who have gone on record supporting the efforts of the Missouri State Board of Education in administering our comprehensive special education mandate. These groups include the following: the Missouri Association for Children with Learning Disabilities; the Missouri United Cerebral Palsy Association; the Missouri Chapter of the National Society for Autistic Children; the Missouri Federation of Council for Exceptional Children; the Governor's Council on Mental Retardation and Developmental Disabilities; the Missouri Association of School Administrators; the Missouri Council of

Administrators of Special Education; the Missouri deaf-blind parents' group; the Missouri Bureau for the Blind; and the Missouri Speech and Hearing Association. These resolutions speak to the perceived priorities in Missouri and suggest that the federal government not impose upon the state other priorities mandated at the federal level but instead permit the state to determine its own needs and devise a system to meet them.

Certainly there are states which require the specific direction as provided by PL 94-142 in order to assure for their handicapped children and youth access to special education services. However, for Missouri, which already is about the task of implementing the full services goal, the procedural specificity of PL 94-142, the unreasonable administrative requirements contained within the law, the unrealistic expectation that state educational agencies could or should intervene into the local educational process to the extent required by the law and the bold intervention by the federal government, the decree of the U. S. Supreme Court notwithstanding, into state decision making will most assuredly jeopardize the strides made at the state level to continue the development of comprehensive special education services for all children in need.

I wish to suggest to Congress that the support systems administered by the Bureau of Education for the Handicapped such as the Regional Resource Centers, the Area Learning Resource Centers, the Deaf-Blind Centers, and others, have been quite effective in supplementing the state effort of directing service and of providing important support in areas mutually agreed upon between the state and federal government. If this concept of cooperation and support could permeate PL 94-142 and the regulations developed thereto, it is Missouri's view that the ultimate delivery of services will be more fully realized.

Finally, may I make reference to the issue that participation in PL 94-142 is not really voluntary by the states as suggested in the preamble to the regulations? Regardless of whether or not the state chooses to participate in PL 94-142, it must assure compliance with the Civil Rights for the Handicapped Provisions of Section 504 of the Vocational Rehabilitation Act of 1973. We do not object to Civil Rights compliance. However, inasmuch as there is little legislative history recorded for Section 504 and inasmuch as the proposed regulations developed pursuant to that law and those under PL 94-142 are so closely intertwined, a state is effectively bound by the regulations of both statutes regardless of its choice to participate in PL 94-142. We question whether Congress intended to impose upon the states the administrative burdens foreseen as a result of Section 504 without providing for us the benefit of Congressional intent and purpose to assist us in its administration.

The State of Missouri, therefore, suggests that Congress reconsider the regulatory provisions of Section 504 at the same time that it reviews PL 94-142 and in lieu of regulations setting forth processes and procedures for compliance to the extent now proposed instead require each state to set forth for review by the federal government its state processes, procedures and policies to be defined by the state's legislative and judicial system and to be determined as sufficient to meet the intent and purpose of Section 504. Such a procedure would permit the state to satisfy the Office of Civil Rights which will enforce Section 504 and at the same time be able to negotiate independently with the U. S. Office of Education, Bureau of Education for the Handicapped, as to whether or not the state wishes to participate in PL 94-142. Thus, participation in PL 94-142 can be truly voluntary, yet the civil rights protections under Section 504 can be satisfied presuming the state can show evidence of legislative policies and administrative procedures assuring the common goal of protecting the rights and serving the needs of the handicapped individual.

Again, the Congress is to be commended for its insight and concern regarding the needs of the handicapped, and I assure you that those of us at the state level in positions of administrative responsibility and leadership join you in your advocacy and implore you not to minimize your attention or concern. We do, however, strongly suggest that the participation at the federal level into the state and local educational programs for handicapped children and youth be reconsidered in light of the present serious administrative realities that may preclude the implementation of the spirit and purpose of the laws which you have passed.

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

FOR THE BOARD OF: National Society Autistic Children
Name of Organization

BY: Steve Markham - President
Name and Title

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WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

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WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

FOR THE BOARD OF: Missouri Council of Administrators of Special Education
Name of Organization

BY: President
Name and Title
8/9/76

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

Bureau for the Blind
FOR THE BOARD OF: Division of Family Services
Name of Organization

BY Charles W. Freeman
Name and Title
Charles W. Freeman, Chief

R E S O L U T I O N

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs conducted by non-public educational agencies and through programs conducted in institutions operated by the Department of Mental Health for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in public (including Department of Mental Health) and non-public educational programs but who are not yet receiving individually prescribed special education services:

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in public (including Department of Mental Health) and non-public programs in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved, either by way of public school programs, institutional programs conducted by the Department of Mental Health, or contractual programs conducted by non-public educational agencies.

State Advisory Council
on Mental Retardation and
FOR THE BOARD OF: Developmental Disabilities
Name of Organization

BY: Elmer H. Behrmann
Name and Title-Chairman

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

FOR THE BOARD OF: Missouri Association of School Administrators
Name of Organization

BY:
Name and Title
Pres

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

FOR THE BOARD OF: Missouri Parents of Deaf/Blind Children
Name of Organization

BY: Carol Crebs-Chairman
Name and Title

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-350 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

FOR THE BOARD OF: United Cerebral Palsy Assn. of Missouri
Name of Organization

BY: Harold C. Edwards - Executive Director
Name and Title

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

FOR THE BOARD OF: the Missouri Association for Children with Learning Disabilities
Name of Organization

BY: Jackie McKenzie President
Name and Title

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

FOR THE BOARD OF: Missouri Speech and Hearing Association
Name of Organization

BY: Randy L Dewar
Name and Title
President, MSHA

RESOLUTION

ADMINISTRATION OF FEDERAL FUNDS MADE AVAILABLE TO THE STATE OF MISSOURI UNDER PROVISIONS OF PUBLIC LAW 93-380 AND PUBLIC LAW 94-142

WHEREAS, the Constitution of Missouri provides for establishment and maintenance of free public schools for gratuitous instruction of all persons in the state within ages not in excess of twenty-one years; and

WHEREAS, Section 162.670, RSMo., provides that it is the policy of the State of Missouri to provide or require public schools to provide to all handicapped and severely handicapped children and youth within the ages of five and twenty-one years sufficient special education services to meet the needs and maximize the capabilities of handicapped and severely handicapped children and youth; and

WHEREAS, Section 162.680, RSMo., provides that no handicapped or severely handicapped child may be denied services because of his handicapping condition; and

WHEREAS, the number of special education classes in the public schools in Missouri has increased from 3,548 in 1972-73 to 5,493 in 1975-76; and

WHEREAS, the number of handicapped students served in the public schools has increased from 70,090 during 1972-73 to 95,467 during 1975-76 (duplicated count); and

WHEREAS, the State Schools for the Severely Handicapped have increased their enrollment of children and youth from 1,906 in 1972-73 to 2,734 in 1975-76 and are currently serving an additional 490 severely handicapped children and youth by contractual arrangements; and

WHEREAS, the State of Missouri has established a program whereby severely handicapped children and youth may be served through contractual programs for services not presently available in the state school system; and

WHEREAS, the Missouri School for the Blind and the Missouri School for the Deaf respectively provide comprehensive special education services to all deaf and blind children and youth in the state who choose to enroll in the programs; and

WHEREAS, Missouri has developed a workable annual census of the handicapped and severely handicapped for locating and identifying all handicapped or potentially handicapped or severely handicapped children and youth under the age of twenty-one years; and

WHEREAS, that census continues to be modified and improved and, subsequent to the 1976 State Plan under Public Law 93-380, standards will be set forth for statewide uniform procedures and compliance; and

WHEREAS, although no conflict exists between the state and federal laws regarding the spirit, intent, or purpose of either statute, a conflict exists, both directly and indirectly, between state and federal law relative to procedural implementation; and

WHEREAS, Missouri has initiated an ongoing awareness campaign in compliance with federal law; and

WHEREAS, federal priorities are presently incompatible with the needs of the individual educational agencies and state educational agency for providing maximum service to all handicapped and severely handicapped children and youth in Missouri; and

WHEREAS, Missouri has greatly reduced its incidence of handicapped and severely handicapped children and youth not receiving an education and affords public special educational services under state and federal law to such children and youth as they are located and identified and appropriately diagnosed; and

WHEREAS, there exists a population of handicapped and severely handicapped children and youth who are enrolled in educational programs but who are not yet receiving individually prescribed special education services;

NOW THEREFORE BE IT RESOLVED, that we, the undersigned, do represent a substantial number of the handicapped and severely handicapped children and youth entitled to and in need of improved special education services in Missouri and support the request of the Missouri Department of Elementary and Secondary Education to the Bureau of Education for the Handicapped that funds made available under applicable law (specifically Public Law 93-380 and Public Law 94-142) be used for more appropriate special education services to the handicapped and severely handicapped children and youth presently in school in Missouri in accordance with state law and with rules and regulations promulgated by the State Board of Education.

BE IT FURTHER RESOLVED, that we, the undersigned, support the continued and improved efforts of the Missouri Department of Elementary and Secondary Education to locate, identify, diagnose, and provide special education programs for those handicapped and severely handicapped children and youth yet unserved.

Executive Board
Missouri Federation Council for
FOR THE BOARD OF: Exceptional Children
Name of Organization

BY: Martin M. Birch, President
Name and Title

Leonard W. Hall
Department of Elementary
and Secondary Education
Jefferson City, Mo. 65101

1. Please expand on Missouri's full services goal and law, describing its comparable provisions to PL 94-142. In addition, please outline those areas of conflict to which you refer in your testimony--due process procedures and equitable participation of nonpublic schools--and any others.

The Missouri General Assembly in 1973 with the passage of HB 474 set forth a very clear, full services mandate to become effective July 1, 1974. That statute and the rules and regulations promulgated therefrom clearly speak to the following components of protection and service.

a. An annual Child Find, i.e., census, to be conducted by school districts and the State Department of Elementary and Secondary Education by May 15 of each year.

b. Clear statutory direction that the least restrictive alternative philosophy permeate the placement and assignment of each handicapped child.

c. That no child be placed or assigned in a special education program without complete and comprehensive diagnostic evaluation including procedures to assure against discriminatory bias in the testing process.

d. That no assignment be made without the parent or guardian first being advised by certified letter of their rights to appeal and due process.

e. That each school district be clearly advised of their responsibility to provide or procure the necessary special education services for all children residing in the district. Such procurement may include the purchase of service with contractual agencies of a public or private nature provided such agencies have received the approval of the State Board of Education.

f. All severely and profoundly handicapped children are the direct responsibility of the State Board of Education although nothing shall prevent school districts from providing such services if the quality of the program can be assured to be at least equal to that offered by the state.

This full services mandate is comparable in its scope of service, protection, and advocacy to those provisions found in PL 94-142. However, the procedures of due process set forth in Missouri law differ from the procedures set forth in federal law. The question is therefore raised as to whether the state should permit the superimposition of the federal process when that process addresses the same goal as is provided by state law. Also, the provisions of

PL 94-142 and, more specifically, the regulations under consideration clearly require a state to permit participation by private schools of a sectarian nature on a basis equal to those of other public or private agencies. Such a requirement is in conflict with Missouri Constitutional law. Therefore, Missouri requests Congress to clarify, within the record of related committee deliberations, its intent regarding such superimposition of federal procedural requirements in lieu of comparable state procedures.

2. If PL 94-142 were not to be amended in any way, how would Missouri proceed with compliance?

   There is a good question as to whether or not Missouri could proceed with compliance inasmuch as the law, as presently interpreted by regulations, would require Missouri to violate its Constitutional prohibition of separation of church and state in order to be in compliance with the federal law. Furthermore, to carry out the procedures of due process, as set forth in the federal law, would require the PL 94-142 state plan to be in conflict with similar provisions of state law. Either or both of these issues appear to be sufficient reason for the state plan not to be approved, although the full services goal and protection of the rights of the child in Missouri are not jeopardized by the state language or requirements.

3. Would you clarify how Section 504 of the Rehabilitation Act (the handicapped discrimination prohibition) ties in with your concerns about the administrative specificity of PL 94-142?

   PL 94-142 by itself is a permissive law which provides the choice by the state as to whether or not it chooses to participate. However, the proposed regulations under consideration interpreting Section 504 of the Rehabilitation Act of 1973 are so closely intertwined with the proposed regulations interpreting PL 94-142 that, in effect, if a state complies with the Section 504 regulations, for which it has no choice, it may as well participate in the funding under PL 94-142 since it will have, for the most part, complied with the provisions of that law through its compliance with the Civil Rights provisions of Section 504. This, in effect, places an educational mandate on the states by the Federal Government that appears to be in conflict with the Supreme Court's ruling that education is not a constitutional guarantee at the federal level but is left to the states and responsibility having been accepted by states such as Missouri.

4. If the Congress implements your suggestion to exempt states from certain procedures of the law, if the State can show clear evidence of comparable, but not identical, statutory or regulatory language, would this not be a retreat from the mandate of service and protection for the handicapped? Would not services vary from state to state?

    Quite likely, the procedures of compliance would vary from state to state just as the administrative, judicial, and educational systems vary from state to state. However, Congress would not need to retreat from its clear mandate but could give the U. S. Office of Education the right to negotiate with the states with reference to their procedural specificity of compliance. The U. S. Office of Education could then share the burden of proof with the states relative to procedures for compliance. It does not appear fair to force the total burden of proof upon the state to comply with federally imposed procedures when many states, previous to the Congressional effort, developed procedures of compliance addressing the full services goal which is the foundation for PL 94-142.

5. How would the Federal Government determine sufficient compliance based upon the submission of evidence from any given state? Would we not find ourselves in the position of providing federal funding to a state without any accountability?

    The accountability question is answered ultimately by whether or not the state does, in fact, have a delivery system of services that is reaching the child and serving his or her needs. As PL 94-142 is written and interpreted, presently the Congress has said there is one way, and one way only, that such an assurance can be made and that way is to follow the procedural specificity of PL 94-142. It does not seem unreasonable that alternative procedures could be reviewed, negotiated, and ultimately agreed upon that would carry out delivery systems of services within and among the various states, ultimately and effectively serving the child, thus, satisfying the accountability question. The determination of sufficient compliance, of course, would rest with the Federal Government, but a basis for negotiation could be realized recognizing the commitments of the state, as well as the commitment of the Federal Government.

6. Finally, do you believe that Missouri is at full compliance with the new state law and that the federal law provides no additional educational guarantees for handicapped children? Would you then say that Missouri does not need the federal support available under PL 94-142?

    Missouri is not at full compliance with its state law but has effectively and quite dramatically developed a delivery system of services over the past three years that places it very near the ultimate full compliance goal. The provisions of the federal law offer no additional educational guarantees for handicapped children in Missouri. The dollars forthcoming from PL 94-142 do not appear to be prioritized by the Federal Government in a manner sufficient to assist us with full compliance but instead impose administrative burdens upon the schools that could divert from their otherwise directed efforts toward program development based upon the priorities as perceived by the people of Missouri and supported by the resolutions that have been submitted for the record. Missouri would be pleased to have the federal financial assistance to supplement the state effort and would be pleased to provide any necessary assurances of accountability to justify receiving those monies. However, Missouri will proceed to reach full compliance with its state law whether or not the Federal Government participates in that effort through PL 94-142 or any other program.

7. The Education for the Handicapped Act has for years required that the State Plan contain assurances of equitable participation of non-public school children. PL 94-142 continues this requirement with changes in language. Why does this now present a problem?

   The issue of equitable or comparable participation of nonpublic school children within federal education programs in Missouri has been an issue long debated and litigated. The state plan submitted by the Division of Special Education under Part B of the Education of the Handicapped Act has annually been negotiated and the issue of private participation then discussed. However, in previous amendments to the Act, there has not been the clear requirement of nondiscrimination against private schools of a sectarian nature as is found within PL 94-142 and the regulations developed therefrom. Therefore, the issue facing us at present is very clearly, and without negotiation at this time, an issue in violation of our State Constitutional Directive. In earlier amendments to the federal act, there was a point of negotiation that could usually be satisfied without violating either state or federal law. Such a point being the availability of access to public services by children enrolled in private schools. Such availability of access remains unchanged although the service appears insufficient based upon PL 94-142.

8. With reference to your recommendation concerning implementation of Section 504, would not the state's legislative and judicial systems simply have to duplicate the work already done at the federal level?

   This depends upon just what work at the federal level is applicable. Certainly no state legislative or judicial action can violate the federal Civil Rights directives. The question has been posed relative to the Congressional intent behind Section 504. Since there is no legislative history and since the implications of the statement in Section 504 are myriad, the states are therefore asking Congress to clarify the intent and purpose behind Section 504 and to offer to us its advice and counsel with reference to the implications that have been raised with reference to the impact of that federal Civil Rights for the Handicapped statement on the various public programs to be affected.

9. If most of the funds for handicapped education eventually will come from the federal level, wouldn't it make sense to mandate federal procedures and guidelines as the simplest way of dealing with the patchwork of different constitutions, different delivery systems, and different levels of competence?

    There is a serious question as to whether or not most of the funds for handicapped education eventually will come from the federal level or whether they should come from the federal level. Education is a right and responsibility of the state. The federal role has been one of support and participation. I question whether the U. S. Congress could, would, or should fund most of the programs for the handicapped throughout the several states. If, in fact, Congress took that role, how could it comply with its mandate of the least restrictive alternative, mainstreaming, and effective integration of handicapped and nonhandicapped children since the intimacy of local programming will be lost by the federal superimposition of regulations and procedural directives? I think quite clearly the evidence is overwhelming that where the Federal Government tries to mandate procedures and guidelines as the simplest way of dealing with the issue, the many and varied state delivery systems prevent a logical system of compliance to come forth. Certainly, if we permitted education to become a federal system, then the differing constitutions and delivery systems of the states would be a patchwork. However, if education became such a federal issue, all states would need to reevaluate themselves with reference to their structure of state boards, state superintendents, local boards, local districts, and the various other components of service delivery that would be extraneous and perhaps unnecessary as a result of the federal control of the programs, such control exceeding the authority provided to the Federal Government by the founding fathers of this nation as interpreted by the courts.

Senator RANDOLPH. Ken Baker. Now, you are substituting for someone else.

Mr. BAKER. My name is Ken Baker.

Senator RANDOLPH. Are you from Montpelier, too?

Mr. BAKER. Yes.

Senator RANDOLPH. I think we might wait for a moment for Senator Stafford to have the opportunity to hear your testimony. I would like to reiterate what I have said often and I reaffirm it—that we are helped by those who testify. We do not take the testimony and place it in print and have it moved to some quiet place. We try to work with that testimony and solve these problems, at least in part, which exist across the country. Out of the testimony of all of these witnesses, I, Senator Stafford and other members of our subcommittee will try to work out realistic legislation to build upon what we have already done, and to provide realistic aid, aid that we can all understand. From these programs and from their administration, the Nation itself prospers.

Senator Stafford, if you will take over.

Senator STAFFORD. I will be glad to, Mr. Chairman.

I am very happy to welcome you here, Mr. Baker. I hope you had better luck getting here than I did last Sunday when I spent an unexpected night in Albany, N.Y., in a snowstorm.

We are looking forward to your testimony, and I am sure this whole committee wants to understand the problems which the special education legislation may have generated in Vermont as well as other parts of the country.

So with no further ado, I will invite you on behalf of the subcommittee to proceed in any way you wish to provide whatever advice to us you can.

STATEMENT OF KENNETH BAKER, SPECIAL EDUCATION CONSULTANT, VERMONT STATE DIVISION OF SPECIAL EDUCATION

Mr. BAKER. My name is Ken Baker, and I am a special education consultant, with the Vermont State Division of Special Education.

Jean Garvin, our State director of special education, has asked me to present her testimony here today.

As a citizen of the United States and as a director of one State program for the education of handicapped children, I am proud of the leadership that has been put forth through the Congress of the United States in assuring the free appropriate education of all handicapped children and all that this means in the way of program support and development. Although we have a long way to go, I think the record is clear that together, the Federal Government, the State government and the local governments have taken major steps forward and do have a collaborative relationship with each other which indeed strengthens educational opportunity for handicapped children. The general position I wish to take today, in regard to the extension and authorization of certain programs under consideration here is that:

1. Continuation of programs to train professional personnel in special education are as essential today as they have been in each of the stages of development of education for handicapped children in this country in previous years.

2. Research and development of new and creative solutions to persisting problems in educating handicapped children are imperative for the future development of truly appropriate education for handicapped children.

Before I pursue these points I would like to tell you that I also believe that this country should have a national advisory committee on the education of handicapped persons. I believe it is both necessary and beneficial to the country at large, to have a committee which reviews and advises the Bureau for the Education of the Handicapped. However, the purpose of the committee is not and need not be strictly advice to the Bureau. The messages concerning the requirements for free appropriate education for all handicapped children, a message from you, the Congress, to the people of this country has been transmitted through that committee.

There are those who can make the case that advisory committees cannot advise very well. I submit to you that during my 3 years as participant and 1 year as chairperson of that National Advisory Committee on the Handicapped, that the committee through its discussions, through its annual report, through its participation on the national scene, was a wise expenditure of Federal dollars. Evaluation of that committee has to look at the unanticipated as well as the anticipated outcomes from that committee. Though I will not take your time today, I could list many of the activities of the committee which I believe support its continuation. Therefore, I respectfully request that you support the continuation of the National Advisory Committee on the Handicapped.

Now, let me go back to the other main concern that I wish to put before you today. First, I believe that part D programs in the training of personnel in special education should be expanded. Support for the present operation of these programs and encouragement to continue to be responsive to the changing needs for personnel in this country is and can continue to be part of that program. I would argue against those that say that Public Law 94–142 will in itself provide the kinds of training activities which our country needs.

Part D, training grants, next to the Education of All Handicapped Children Act itself, is and continues to be the single most important piece of legislation ever passed on behalf of the education of handicapped children. In Vermont part D programs were the catalyst for State participation in training of special education teachers and consultants. The administration of the act resulted in statewide planning, and cooperatives among training institutions, the State Department of Education and local school districts. The act resulted in very important amounts of financial support to actual training activities. Part D money both at the University of Vermont and at the State department of education level are the major reason why Vermont will be able to approximate the standards of free appropriate education set by Public Law 94–142, by September 1978.

Second, in my opinion it is not true that special education personnel can be effectively trained by the State department of education and/or local school districts working alone. Please remember that I say that from a position of director of special education in Vermont. Our partnership with the University of Vermont, the College of St. Joseph the Provider, has been undergirded and strengthened by part

D funds as well as the administrative direction of the Bureau of Education for the Handicapped. The partnership is fostered and strengthened by your present law and needs to be continued.

Third, the General Accounting Office report not withstanding, all the training of leadership personnel for all remote parts of this country of ours has not been completed. Updated information beyond the General Accounting Office report show that part D funds have been supporting inservice training to a greater extent than that report indicates. Promoting local inservice training as a single goal without regard to the training function of the university. State and local systems is not enough. Attention must be given to a balanced program of training which includes attention to attrition, to the appropriate roles that personnel have to play in various parts of the United States, and especially to the training of leadership personnel who will continue to develop and train the skills of others.

May I tell you how we have managed some aspects of this in Vermont. We believed and still believe that the best way to assist regular class teachers to educate handicapped children in regular classrooms is to work with that teacher on one child's unique educational activities, right in a setting where the teacher is teaching and the child is learning.

We do not believe that the use of scarce Federal resources for training grants should be directed toward overall coursework which does not address itself to the specific educational needs of specific children. Therefore, we have chosen in Vermont to train professionals with the help of part D money so that they can in turn train others. It is an important part of their training and this type of model needs to be encouraged and supported throughout the United States.

In my opinion, we will not solve our training problems by sending the greatest share of scarce Federal resources to short term local district projects who neither have the time nor the resources to effectively plan the kind of in-depth training which is required for the future education of handicapped children. This does not mean that local school districts should not have a share of the resources, nor does it mean that they should not be in the planning. The proper vehicle for planning is either regional or statewide planning consortiums, such as have been fostered by the Bureau, and the allocation of funds to priorities within that system.

Because I believe that Public Law 94–142 will present problems that do require new and creative solutions, I encourage you to continue to support model solutions. These should not be focused on a categorically labeled group of children, but toward the general problems of service delivery systems for all of the children of the future under the concepts that have been so clearly articulated in Public Law 94–142, such as the provision of appropriate services in the least restrictive alternative and the relationship of those programs to other programs such as special class and residential care. We have learned how to write individual education programs.

Have we learned the strategy and procedures for coordinated management of such programs? Although we have good professional opinion, we still do not have a system for determining placement of handicapped children in the least restrictive environment. And we still need models of programs to serve previously unserved adolescent pupils to name a few.

The State board of education in Vermont, knowing that I was going to make this presentation to you today, passed a resolution that reflects to a great extent the will of the people in Vermont. Although it is not particularly relevant to the immediate issues under consideration today, I would like to take this opportunity to tell you that the State board of education in Vermont this year is requesting additional funds of between $3.6 and $5.3 million to expand our programs for handicapped children.

In line with this, the State board of education wanted me to communicate to you that they feel that Congress should shorten its time line for full funding of the formula under Public Law 94–142 by meeting your full obligation in fiscal year 1978, similar to that required of the States and local districts, so that the country can be guaranteed that there will be full Federal, State, and local support.

I encourage you to support the type of legislation which will continue part D training and where needs will continue to be addressed through an administration which is responsive to all aspects of training of personnel, including provisions for staff turnover, university support, State department of education statewide planning and local district plans which demonstrate attention to causing beneficial child change.

On another aspect of the bill, the research and development efforts provided for in recent and current legislation will need to increase in order to generate creative solutions to future educational needs of handicapped children. I urge your support for a variety of means of getting at research and development. We need more basic research. We need it to apply to the practical problems of educating handicapped children. It is not true that most of the education problems of handicapped children have now been resolved. There are many unresolved issues and problems that require serious study. What is needed is a study of various systematic combinations of providing free appropriate education. Components of various service delivery systems must be studied in relation to each other. New methods of locating and identifying handicapped children that are not categorical must be designed. New ways of looking at children with learning disabilities are in order.

We need model programs which are redesigned for the last part of this decade. The research and development moneys that have come through your research grants and the developments which have come through model programs in early education and learning disabilities are important. The early education grants continue to be a great facilitator of both sound practices and statewide development.

Full funding is imperative if we are to provide a free appropriate education for handicapped children. The Congress has set the pace at least in our part of the country. The States and local districts are making every effort to comply. We do respectfully request that you seriously consider shortening your time line to bring us the projected funds at the same time we are required to be in full compliance. I hope I have communicated to you our support for extending the authorization for part D training funds, for continuing research and development activities, and the full Federal support required for the implementation of Public Law 94–142.

Senator STAFFORD. Mr. Baker, we thank you very much.

As a personal note, I will ask you to convey my regards to Jean Garvin when you get back to Vermont.

Your testimony has been very helpful to this subcommittee, and I can assure you that the members who are not here at the present time will read your testimony and the written record.

Speaking personally, I can also assure you that this Senator will support the continuation of the National Advisory Council on the Handicapped, and convey to the Vermont Board of Education my admiration for their courage in seeking more funds for the programs for the education of the handicapped in Vermont. I think that is money especially well spent. I hope they get it.

One way teachers say they learn best is through teacher centers. Do you think we should use this approach to help teachers prepare to meet the needs of their handicapped students?

Mr. BAKER. I don't think that teacher centers are necessarily a bad idea or good idea. If they do in fact result in teachers acquiring new skills, skills that they are going to need if they are going to serve handicapped children, I guess maybe our bias—I don't know if that is quite the right term—but we do believe that the first line of training should be through actual field course work in school districts where teachers do learn not only the theory but the direct application of new skills.

Senator STAFFORD. Thank you very much, Mr. Baker. We appreciate your coming down here and helping us a great a deal.

Mr. BAKER. Thank you very much.

Senator STAFFORD. The chairman will ask Mr. Thomas Stephens, of Ohio State University, to take the witness table.

Welcome to you, Mr. Stephens. We will invite you to proceed as you wish. Either we can put your entire statement in the record verbatim or you can deliver it or you can speak extemporaneously, as you wish.

Mr. STEPHENS. Thank you, Senator Stafford. In view of the time, perhaps I can just hit the highlights of my statement.

Senator STAFFORD. In that case, without objection, your statement will appear in full in the record, and you are free to go ahead.

STATEMENT OF THOMAS M. STEPHENS, CHAIRMAN OF THE HIGHER EDUCATION CONSORTIUM FOR SPECIAL EDUCATION, OHIO STATE UNIVERSITY

Mr. STEPHENS. Thank you very much. I am here representing the Higher Education Consortium for Special Education, and it certainly is a pleasure to report to the subcommittee regarding our activities last January in Atlanta. We devoted a considerable amount of our time, Senator, to this report.

My comments will relate directly to parts of Public Law 94–142 having implications for professional preparation, and some comments addressed specifically to the GAO report entitled, "Training Educators for the Handicapped—a Need To Redirect Federal Programs."

A portion of my testimony covers five recommendations concerning Public Law 94–142 and Public Law 93–380. The first recommendation is that maximum effort should be directed at funding Public Law 94–

142 to the level of authorization. This is particularly important in view of the provision of free and appropriate public education for all handicapped children and youth combined with the specific requirements such as the required individual education plan for each handicapped child. These requirements will result in a need for increased resources at the local level. The fiscal implications of this legislation for local districts and State education agencies will create significant hardships unless the Federal appropriations specified in the law are allocated. Compliance with Public Law 94–142 will require local districts to employ specialists, increase expenditures for specialized instructional materials, transport additional handicapped students, and in general increase their [illegible] and planning expenditures.

Our second recommendation deals with Public Law 93–380. We would like to see Public Law 93–380 renewed and appropriations for training personnel as related to part D of this act should be considered as a high priority in relation to the new demands placed upon institutions of higher education for the preparation of special education personnel.

Senator, in view of the time, I am not going to give you our rationale for this recommendation, but would be happy to discuss it with you if you would like.

Our third recommendation is that provision should be made to assure the development and maintenance of a national network of comprehensive special education personnel preparation programs. Essentially in a nutshell we feel that the Congress has invested a considerable amount of funds in developing what we believe now is a network of comprehensive higher education program for preparing the handicapped. We believe that it would be unfortunate at this time if that network was not supported to the extent that is necessary. We strongly encourage that priority be placed on supportive comprehensive training programs in the allocation of Public Law 93–380 part D funds.

Our fourth recommendation is to urge strongly that funding for personnel preparation in highly specialized areas of the handicapped, such as severely and profoundly handicapped, be directed at universities having the necessary support services so as to develop and maintain programs of high quality

Here at this point, Senator, the major thrust of our rationale is that there is a need for interdisciplinary training programs such as those that are often found in relationship to medical facilities that are essential if we are to have high quality programs, and therefore we are suggesting to the Congress that Federal funds used in this area support training programs restricted to those institutions of higher education with the capacity to train teachers of the severely and profoundly handicapped in an interdisciplinary setting.

We are not suggesting that this be necessarily true for other programs for preparing personnel that are working with the mildly handicapped.

Our fifth recommendation is that it seems important that Federal funding of special projects, development, and evaluation efforts be continued as a function of the Bureau of Education for the Handicapped. Without going into great detail regarding that rationale, Senator, we just believe that with the passage of new legislation, it is important that we continue to evaluate rigorously new thrusts, program thrusts, so that we can determine which should be discarded and which should be maintained.

At this point I would like to just make a few brief comments regarding the GAO report. We believe that the GAO report does not assess adequately the training needs of the Nation with respect to the education of the handicapped, and we believe this is especially true when that report is placed within the context of Public Law 94–142. For example, the report implies that a larger proportion of BEH's budget should be assigned to inservice training of regular educators.

We have looked at the budget proposed by the Bureau of Education for the Handicapped for 1978–79 and those allocations to priority areas such as the training of regular educators, teachers of the severely handicapped, and to paraprofessionals. It is obvious to us that a commitment has been made to support the preparation of special education support personnel. This balance that is reflected in the proposed budget in allocations appears to be appropriate. Out of approximately $45 million, only $8.5 million are assigned to the general support of special education, and an additional $9.4 million are requested for preparing teachers of the severely handicapped. A substantial amount of money is designated for training regular educators. Funds are proposed for continuing and increasing support for grants to deans of colleges of education in order to prepare regular educators in mainstreaming handicapped children.

Implicit in the GAO report is the false notion that regular education personnel with little additional training can meet the mandates of Public Law 94–142 and, therefore, serve the educational needs of the Nation's handicapped children. That report suggests that little has been done to prepare regular teachers to work with the handicapped. But in fact, since 1973 BEH has stressed the inservice and preservice training of regular educators. The 65 deans' grants currently funded by BEH attest to that priority.

For the 1978–79 year, BEH is proposing that $2 million be expended to prepare paraprofessionals to assist teachers. This budget request appears consistent with the GAO's recommendation. To be effective in programing for handicapped children, regular educators need training plus access to training specialists who are skilled in assessment and remediation practices specific to handicapped children.

The GAO report highlights the need for inservice training. We support this observation but recommend that the emphasis on inservice be in the context of cooperative programs involving institutions of higher learning, local educational agencies, and State educational agencies. This cooperation will also allow for standards to be applied which may result in college credit being offered when appropriate.

Most importantly, the involvement of IHE's inservice training will allow for an exchange of information that can improve present as well as inservice offerings. Of course, such efforts will necessitate contractual support through Public Law 93–380.

In reading the GAO report, one can easily overlook the pressing need for more trained specialists. Throughout their report they refer to the handicapped, but many of their comments really relate to the mildly handicapped. The severely handicapped do require special education personnel who are prepared at the preservice level.

Our position then is that there is a continuing and crucial need for persons lightly trained to provide direct services to handicapped youngsters, for supportive services to those providers of direct services, to provide leadership in State and local agencies, and to extend the base of knowledge related to educating the handicapped, and to disseminate existing and new knowledge.

Previous legislation has created and renewed the Bureau of Education for the Handicapped for the purpose, among others, of assisting the Nation in meeting these initial training needs. BEH has made strides in producing a cadre of leadership personnel essential for realizing the goals of Public Law 94-142.

We don't believe that the GAO report acknowledges the demand for personnel created by Public Law 94-142, and if the GAO recommendation is followed it would seriously curtail an important national effort.

Of course, we commend the Congress for its past and future support of that effort.

In closing, Senator, I would like to thank you very much on behalf of the higher education consortium, for permitting me to appear before this committee.

Senator STAFFORD. Dr. Stephens, we appreciate your being willing to come here and give us the benefit of your advice. I can assure you, as I did Mr. Baker, that the members of the subcommittee who are absent because of other committee assignments will read your testimony and consider it in the deliberations of the subcommittee.

Let me ask you one question: What do you say is the top priority in manpower training?

Mr. STEPHENS. Senator, I believe the top priority is to prepare personnel specialists in special education to be effective in working with the multihandicapped child.

Senator STAFFORD. Thank you very much, Dr. Stephens. We are very grateful to you, and at this point the Chair is about to recess the committee for the day.

Tomorrow the subcommittee will resume hearings at 9:30 a.m. in room 4232 of this building. The Chair wishes to emphasize that that is not this room. This room customarily is the jurisdiction of the Public Works Committee. We will be back in our own room at the other end of the corridor on the same floor tomorrow. That is room 4232.

At that time we expect to hear from persons and organizations who have a variety of concerns covering all aspects of a handicapped person's life. Dr. Henry Viscardi, chairman of the White House Conference on Handicapped Individuals, will also be with us to tell us about the activities of the White House conference.

[The prepared statement of Mr. Stephens along with additional material supplied for the record follows:]

TESTIMONY

UNITED STATES SENATE SUBCOMMITTEE
ON THE HANDICAPPED

By: Thomas M. Stephens
Chairman
Higher Education Consortium For
Special Education

and

Professor and Chairman
Exceptional Children
College of Education
The Ohio State University
Columbus, Ohio 43210

Thursday, February 24, 1977
4200 Dirksen Senate Office Building

Gentlemen:

As Chairman of the Higher Education Consortium for Special Education, it is my pleasure to appear before this most important subcommittee of the United States Senate.

Our organization is a professional, non-profit association devoted to the improvement of programs for the handicapped through provisions of quality personnel preparation programs by institutions of higher education. Our membership is by institution and consists of departmental chairpersons representing colleges and universities with comprehensive preparation programs. During our meeting in Atlanta, Georgia on January 19, 20, and 21, 1977, our membership devoted a significant amount of time to the development of this testimony.

My comments will relate directly to parts of P.L. 94-142 having implications for professional preparation, serious concerns about the report to the Congress by the Comptroller General entitled, Training Educators For the Handicapped: A Need To Redirect Federal Programs (September 28, 1976) and suggested changes to existing legislation.

Recommendations

1. Maximum effort should be directed at funding P.L. 94-142 to the level of authorization. The provision of a free and appropriate public education for all handicapped children and youth combined with specific requirements such as the required individual education plan for each handicapped child will result in the need for increased resources at the local level. The fiscal implications of this legislation for local districts and state education agencies will create significant hardships unless the federal appropriations specified in the law are allocated. Compliance with P.L. 94-142 will require local districts to employ specialists, increase expenditures for specialized instructional materials, transport additional handicapped students, and in general increase their pupil evaluation and planning expenditures.

2. P.L. 93-380 should be renewed and appropriations for training personnel as related to Part D of this act should be considered as a high priority in relation to the new demands placed upon institutions of higher education for the preparation of special education personnel. Implementation of P.L. 94-142 is dependent upon the availability of trained personnel and the ability of local educational agencies to employ these individuals. In addition to the currently unmet personnel needs in the areas of teachers with special training, teacher trainers, and

specialists with program planning and assessment skills. P.L. 94-142 will create major personnel training needs in specific areas. These specific areas include teachers of the severely and profoundly handicapped, pre and in-service training of regular educators to teach handicapped children and youth, and the preparation of supervisory and program planning personnel. To meet these needs will require major investments on the part of institutions of higher education. The continuation of program and graduate support is critical to the future capability of institutions of higher education to meet personnel needs.

3. Provision should be made to assure the development and maintenance of a national network of comprehensive special education personnel preparation programs. The specialized resources required to train certain special education personnel and the resources necessary for research and development related to educational programming for the handicapped require a comprehensive program base. Allocations to institutions of higher education through P.L. 93-380 and preceding legislation have resulted in the establishment of a nucleus of universities with comprehensive training and research resources in Special Education. These institutions serve a national and regional mission in addition to responding to local needs. Individual states cannot be expected to independently support these comprehensive programs which carry national and regional responsibilities. Such comprehensive programs, however, are essential to the nation's capability for meeting its obligation of personnel training and research in the education of the handicapped. We strongly encourage that priority be placed on support of comprehensive training programs in the allocation of P.L. 93-380 Part D funds.

4. We urge strongly that funding for personnel preparation in highly specialized areas of the handicapped, e.g., severely and profoundly handicapped be directed at universities having the necessary support services so as to develop and maintain programs of high quality. With the public schools now assuming responsibility for the education of the severely/profoundly handicapped the need exists for a major investment in programs to prepare needed personnel. Because the severely/profoundly handicapped represent a population of individuals with multiple handicaps an interdisciplinary training program to prepare teaching personnel is needed. Such programs exist only in those institutions of higher education with comprehensive special education resources. Federal funds used in this area to support training programs should be restricted to those institutions of higher education with the capacity to train teachers of the severely/profoundly handicapped in an interdisciplinary setting.

5. It is important that Federal funding of special projects, development, and evaluation efforts be continued as a function of the Bureau of Education for the Handicapped. As new instructional programs are implemented for the handicapped, these changes will require extensive research, development, and evaluation efforts before we can have great confidence in the effectiveness of new administrative and instructional strategies. Related to this recommendation is the need for more model projects across the spectrum of handicapping conditions if we are to keep pace with the changing societal needs of the handicapped.

Comments Concerning The General Accounting Office's Report

We believe that the GAO report entitled Training Educators For The Handicapped: A Need to Redirect Federal Programs does not assess adequately the training needs of the nation with respect to the education of the handicapped. This is especially true when that report is placed within the context of P.L. 94-142. The report implies that a larger proportion of BEH's budget should be assigned to inservice training of regular educators.

We have looked at the budget proposed by the Bureau of Education for the Handicapped for 1978-79 and those allocations to priority areas such as the training of regular educators, teachers of the severely handicapped, and to para-professionals. A commitment has also been made to support the preparation of special education support personnel. This balance in allocation across priorities appears to be appropriate. Out of approximately $45 million, only $8.5 million are assigned to the general support of special education. An additional $9.4 million are requested for preparing teachers of the severely handicapped. A substantial amount of money is designated for training regular educators. Funds are proposed for continuing and increasing support for grants to Deans of Colleges of Education in order to prepare regular educators in mainstreaming handicapped children.

Implicit in the GAO report is the false notion that regular education personnel with little additional training can meet the mandates of P.L. 94-142 and, therefore, serve the educational needs of the nation's handicapped children. That report suggests that little has been done to prepare regular teachers to work with the handicapped. But in fact, since 1973 BEH has stressed the inservice and preservice training of regular educators. The sixty-five Deans' grants currently funded by BEH attest to that priority.

For the 1978-79 year, BEH is proposing that $2 million be expended to prepare para-professionals to assist teachers. This budget request appears consistent with the GAO's recommendation (p. ii). To be effective in programming for handicapped children, regular educators need training plus access to training specialists who are skilled in assessment and remediation practices specific to handicapped children.

The GAO report highlights the need for inservice training. We support this observation but recommend that the emphasis on inservice be in the context of cooperative programs involving IHE's, LEA's, and SEA's. Through cooperative efforts, the resources of the IHE's can be effectively utilized in inservice training. It will also allow for standards to be applied which result in credit being offered when appropriate. Most importantly, the involvement of IHE's in inservice training will allow for an exchange of information that can improve pre as well as inservice offerings. Such efforts will necessitate contractual support through P.L. 93-380. Without such support, IHE's would have to restrict preservice training to address inservice needs. The continued need for preservice graduates has already been cited.

In reading the GAO report, one can easily overlook the pressing need for more trained specialists. The severely handicapped do require special education personnel who are prepared at the preservice level.

Our position is that there is a continuing and crucial need for persons highly trained: (a) to provide direct services to handicapped youngsters, (b) for supportive services to those providers of direct services, (c) to provide leadership in state and local agencies, (d) to extend the base of knowledge related to educating the handicapped, and (d) to disseminate existing and new knowledge. Previous legislation has created and renewed the Bureau of Education for the Handicapped for the purpose, among others, of assisting the nation in meeting these initial training needs. BEH has made strides in producing a cadre of leadership personnel essential for realizing the goals of P.L. 94-142. The GAO report does not acknowledge the demand for personnel created by P.L. 94-142. The GAO recommendation, if followed, would seriously curtail an important national effort. We commend the Congress for its past and future support of that effort.

In closing, and in behalf of the Higher Education Consortium, thank you for permitting me to appear before this committee.

2/77

Education Commission of the States
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February 17, 1977

The Honorable Jennings Randolph
Chairman, Subcommittee on the Handicapped
Committee on Human Resources
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

This letter is submitted on behalf of the National Governors' Conference, the National Conference of State Legislatures, the Education Commission of the States, the National Association of State Boards of Education, and the Council of Chief State School Officers. We ask that it be included in the record of your Subcommittee's hearings on programs for handicapped children to be held in February.

The Education for All Handicapped Children Act of 1975 (Public Law 94-142) is one of the most significant federal education laws of the last decade. You, Senator Williams, and the other Congressional leaders who were responsible for the enactment of this legislation deserve great credit for placing the special needs of handicapped children high on our national agenda. The law establishes the goal of a free, appropriate, public education for every handicapped child. It charts a new course in the fiscal and political relationships between the federal government and the states.

The undersigned organizations and the states which they represent are dedicated to the principle of equal educational opportunity for handicapped children. We do not seek a retreat from the goals of PL 94-142; indeed, we urge that they be pursued with diligence. We are concerned, however, that, without a substantially increased federal financial commitment to those goals and without modifications in some of the procedures and processes required by the statute, both federal and state efforts will fall short of meeting the needs and fulfilling the expectations of handicapped children and their families.

During the past year, there have been a number of regional meetings on the implementation of PL 94-142. Additional meetings are being held in the process of developing regulations. We commend the Bureau of Education for the Handicapped for broad involvement of the state officials in the development of regulations. As the rulemaking process proceeds, and as the requirements and implications of the law are better understood, some of our concerns may be addressed. It is becoming increasingly clear, however, that a number of problems are statutory and require legislative solution.

The purpose of this letter is not to propose final solutions, but is to demonstrate the urgent need for the steps leading to solutions to be started immediately. Even though the authorizations in PL 94-142 do not formally expire until 1982, we urge the Subcommittee to initiate immediately a thorough examination of this Act with the expressed intent of reporting in this session of Congress such amendments as may be necessary to improve the effectiveness of the statute.

1. Federal Commitment to Pay Its Share of the Costs

A federal statute which requires states, as a condition for receiving federal assistance, to make legal and financial commitments to provide a wide range of services should include a strong federal commitment to pay the federal share of the costs of those services as authorized in the statute. PL 94-142 requires states to make such a legal commitment, yet the federal share of the cost of those services is not only relatively low, but also is subject to the uncertainties of the annual federal budget and appropriations processes.

Under Section 612, the law requires that to qualify for federal assistance a state must have a policy which guarantees the right to a free, appropriate, public education to all handicapped children. Our construction of the statute is that this requires the creation of a right of action on the part of any child who is an intended beneficiary. This view is supported by Section 121a.21 of the proposed regulations, which requires the program plan to include a "statute, court order, state attorney general opinion or other state document" showing such policy. The policy must apply to all handicapped children; implement the priorities for service set forth in Section 612(3), apply to all state agencies providing special education and related services, and establish timelines to implement the policy by September 1, 1978 and September 1, 1980.

The effect of PL 94-142, then, is to mandate that the states establish a policy guaranteeing the right to certain services estimated to be of substantial cost, while the states have no guarantee that the Federal Government will pay its share of those costs. State education agencies have reported to the US Bureau of Education for the Handicapped that the outlays required to achieve the program envisioned in the statute will exceed $9 billion per year. This would more than double current state spending for education of handicapped children and would be about thirty times the authorized funding for PL 94-142 for FY 1978.

We are greatly concerned about the basis for determining the federal share of the costs of implementation of PL 94-142. At the very minimum, the Federal Government should make a firm commitment to pay at least the share which is currently authorized in the statute. Secondly, the federal share should be significantly increased beyond that authorized for the first two years. One alternative to address this concern would be to amend the statute to authorize the US Commissioner of Education to enter into contracts with participating states to pay stipulated, specific amounts of federal aid. The provision of such a "contract authority" would commit the Federal Government to pay its share of the costs and would require federal appropriations to meet this commitment much as an entitlement program.

2. The Basis for Determining the Federal Share

The basis for determining the federal share of the costs of implementing PL 94-142 does not appear to be well-founded. It is determiend by multiplying a percentage of the national average per pupil expenditures in public elementary and secondary schools in the United States by the number of handicapped children counted as receiving special education and related services. The costs of providing special education services, especially the individualized approach required by PL 94-142, are far in excess of average per pupil expenditures. If the cost of an adequate national program under PL 94-142 is $9 billion, as estimated by the Congressional Budget Office, the $3 billion contributed by the Federal Government in 1982 (based on 40% of the national average per pupil expenditures) would pay only one third of the costs. If the $9 billion figure is underestimated, the share to be borne by the states would be even greater. Consideration should be given to changing the basis for calculating the federal share of the costs of implementing PL 94-142 so as to reflect the real costs of providing individualized special education and to increase substantially the proportion of the excess costs to be paid by the Federal Government.

3. Timetable for Implementation of PL 94-142

Given the level of federal funding, the extensive variations among states in their policies and funding commitments for education of handicapped children, and the breadth of the service, administrative and fiscal implications of PL 94-142, the Subcommittee should give serious consideration to a modification of the timetable for implementation of the statute. We make this suggestion not because we believe there should be any retreat from the goals of the statute, but because of practical obstacles to meeting the mandated implementation schedule. Examples of the problems created by the present schedule are as follows:

a. Several states initiated plans to meet the needs of handicapped children before enactment of PL 94-142. These plans called for year-by-year expansion of the states' commitments. To the extent that these existing state timetables deviate from the federal timetable by two or three years, substantial changes may have to be made in the state programs. An adjustment in the federal timetable would avoid this disruption;

b. While some states had already taken action to meet handicapped childrens' education needs prior to enactment of PL 94-142, some had not. These states face major build-up costs just at the point at which the federal share of those costs is lowest. Both additional implementation time and additional federal assistance for build-up costs would increase the chances that all states, even those that have the farthest to go, would be able to fulfill the service commitments of PL 94-142;

c. The federal timetable presumes that states and localities can provide an additional $4 to $5 billion in special education services in less than two years. The feasibility of this is questionable. While the fiscal condition of most states and localities is better today than a year or two ago, there is great variability from state to state and fiscal conditions are likely to worsen in the states which have borne the brunt of recent weather conditions -- both cold and drought. In other cases, commitments to meet financial needs of the general school population and the base costs of education programs for handicapped children on which special education must build may have to be modified to permit a shift of state funds to implement PL 94-142;

d. Shortages and maldistribution of personnel to meet the educational and related needs of handicapped children will cause problems for school systems attempting to implement PL 94-142. The problem goes beyond the availability and distribution of trained special education teachers. PL 94-142 places a strong emphasis on education of handicapped children in the "least restrictive environment," meaning that handicapped children are to be educated in the regular classroom whenever possible. A major emphasis, then, must be given to training and retraining regular classroom teachers to relate effectively to handicapped children. Again, PL 94-142 provides neither the time nor the financial resources to address these personnel issues.

One alternative for modification of the implementation timetable would be to require states to specify their unmet special education service needs by no later than September 1, 1978, and then to require the state to eliminate a percentage of its stated service shortfall in each of the following four years.

4. Mandated Pass-Through and Priority Service

Subsections 611(b) and (c) require a recipient state to pass-through a fixed percentage of the Federal funds received under this legislation to local education agencies. The mandated pass-through is 50% in FY 1978 and 75% in subsequent years. These requirements are not onerous in themselves, since the bulk of educational services are provided by local education agencies, and state governments, through categorical programs and formula aid, which provide funds for special education far in excess of federal aid.

The law, however, requires that funds be distributed to local education agencies in accordance with a strict formula which requires flat payments to districts on the basis of the number of children served. The effect of this is to provide the same level of assistance to wealthy school districts as to those with low tax bases. The result runs directly counter to the efforts of many states to equalize school aid systems and to the Congressional concern with equalization which is reflected in Section 842 of the Education Amendments of 1974.

An alternative to address this problem would be to amend Section 611 to continue to require the pass-through, but allow distribution of funds to local education agencies through a consistently applied formula.

In addition, Section 613 requires that funds be expended to achieve the priorities of meeting the needs of unserved children and, secondly, inadequately served, most severely handicapped children. How this provision is intended to be implemented is not clear. It is conceivable that all federal funds could be directed to a single school district which had failed to implement any program, while denying funds to and penalizing districts which have, on their own initiative, instituted adequate programs. If the priorities are intended to apply to the use of funds within an LEA, the law might be amended to clarify this point. If they are intended to apply to the allocation of funds among LEAs, the statute might be amended to make it clear that such distribution should be compatible with a state's school aid system and program for financing special education services.

5. Relationship with Section 504, Rehabilitation Act

Section 504 of the Rehabilitation Act of 1973, as amended, prohibits discrimination on the basis of handicap by a recipient of federal funds. We support this Section and its intent of assuring equal rights to handicapped individuals. The Education for All Handicapped Children Act is designed to aid states in delivering a free, appropriate, public education to all handicapped children. It is not a civil rights law. However, the Department of Health, Education, and Welfare, in interpreting Section 504 of the rulemaking process, has stated in the Notice of Proposed Rulemaking, 41 FR 29559, July 16, 1976:

> "....the principles enunciated in the court orders and embodied in PL 94-142 establish the minimum standards for nondiscriminatory elementary and secondary education programs and should therefore be specifically set forth in this regulation...." (emphasis added)

We question this interpretation of both Section 504 and PL 94-142. By incorporating the PL 94-142 requirements, HEW is stating that a state can meet the Section 504 standard for nondiscrimination in education of handicapped children only through implementation of the provisions of PL 94-142. It ignores the state's other institutional mechanisms which can be utilized in assuring nondiscrimination in education, such as Title XX services; EPDST in Medicaid; and Crippled Children's programs. Furthermore, it is unduly restrictive and prescriptive in attempting to define nondiscrimination in terms of PL 94-142.

It should be made clear that Section 504 is designed to guarantee equal rights for handicapped people and that the test for determining whether such rights are being met should not be limited or tied to the requirements of PL 94-142. A guarantee of rights should not lead to a federal prescription of the only means of recognizing and procuring those rights.

6. Supplanting and Co-mingling

Sections 613(a) (9) and 614(a) (2) require that states provide assurances that federal funds not supplant or be co-mingled with state and local funds. Section 613(a) (9) provides that "where the State provides clear and convincing evidence that all handicapped children have available to them a free, appropriate, public education, the Commissioner may waive in part the requirements" regarding supplanting and co-mingling. These requirements seem inconsistent with the requirement that a state make a commitment, as a matter of state policy, to the provision of a "free, appropriate, public education." If a state must make a legal commitment to such a program, the state should not be required to segregate the federal aid which is likely to be only a small portion of the support for the required services. Further, the management of all funds should be left to the discretion of the state to meet the service requirements of the Act within the unique fiscal and educational context of the state. The provision which allows the Commissioner to waive the requirements does not give a clear standard on which the Commissioner is to base the determination and, therefore, may not provide an effective remedy for the problems created by the requirements for most states. The resolution of this issue must relate to the more fundamental concerns raised earlier in this letter regarding the share of the costs of implementing the Act to be borne by the Federal Government.

7. Administrative Costs

The Act places a number of requirements on the states which may push administrative costs above the administrative set-aside of 5% of the state allotment, or $200,000, whichever is greater.

For example, states must train personnel; establish detailed public hearing procedures on policies under the Act; establish detailed procedural safeguards; monitor LEAs for compliance; assure services are provided to children in private schools; audit, evaluate and report on the state program; make innumerable reports; collect data and keep records; and cover the cost of litigation. Some states feel that the federal requirements are sufficiently close to their state requirements that the additional cost should be manageable. Other states feel the costs will be extremely high and beyond the amount set aside.

The administrative requirements under the Act should be reviewed carefully in order to eliminate those which are duplicative of existing federal and state requirements. If evidence is developed which indicates that the costs of the administrative requirements are greater than the allowances provided, consideration should be given to increasing the set-aside above 5%.

8. Individual Education Program

Section 604 of the statute requires the development of a written individual education program (IEP) for each handicapped child. This is an excellent technique for the joint identification of needs and the services appropriate to meet them. Experience with this approach under state programs and the Rehabilitation Act will be helpful in implementation of this program.

Section 614(a) (5) requires each local education agency (LEA) to assure the IEP be established for each handicapped child at the beginning of each year and renewed at least annually. This program is required under Section 602(19) to include a statement of the services to be provided to each child. During the House debate, Congressman Quie stated that the IEP is not to be a binding contract for the schools, children and parents. The US Office of Education, in contrast, has indicated that the IEP holds the state or LEA legally responsible for delivering the services outlined.

The IEP, in other words, is viewed as a contract among a state, an LEA and a child as to the delivery of specific services, and makes the drafting of each IEP a potential adversary proceeding. What was intended to be a constructive beneficial procedure may become an adversary proceeding at its inception. The result is contrary to the intended result of the law and the rationale for an IEP.

The definition of "individual education plan" should be modified to make clear that the IEP is to be considered a planning document and not a definition of legal responsibilities and obligations.

Beyond the legal issues, the IEP provisions of PL 94-142 are seen by many as unusually prescriptive and, while the concept of an IEP is generally supported, serious questions can be raised regarding the role of the Federal Government in specifying the form of such plans.

9. Due Process Requirements

Section 615 requires each state and local education agency to set forth a very detailed set of procedural safeguards with respect to notice, complaint and right to a hearing and judicial process concerning any change or evaluation of a child and the provision of a free, appropriate, public education. In many instances this requires costly duplication of existing procedures. Furthermore, the cost of providing such safeguards, which would constitute an excess cost, may take a large amount of the state's administrative set-aside, as well as a percentage of an LEA's allocation, thereby reducing the funds available for services.

Rather than outlining the specific due process procedures, the federal law could require states to demonstrate that they substantially comply with the due process requirements through existing state procedures.

A number of issues, in addition to those listed above, have been raised by our constituents. Examples of these include the implications of the requirement that the state education agency supervise the activities of other state agencies, a requirement which conflicts with the constitutions and statutes of several states; the difficulties and administrative burden associated with the child count requirement, and the issue of body counts as opposed to aggregate service counts; and the immediate issue of the initial counts in relationship to the appropriations available for use in FY 1978.

During the coming weeks, the undersigned organizations will continue to follow the rulemaking process closely and will be participating in the regional meetings and other activities aimed at effective implementation of the law. At the same time, we will be gathering additional data about these initial concerns. We would be pleased to share additional information with the Subcommittee.

In summary, our main concern is that, if the goals of PL 94-142 are to be achieved, the commitment of the Federal Government to paying a significant share of the start-up and continuing costs must be increased. We urge the Subcommittee to begin immediately to review the Act in light of the concerns which are being raised and to report such amendments as may be necessary during this session of the 95th Congress.

Please address requests for further information and assistance to Warren G. Hill, Executive Director, Education Commission of the States, 300 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80295; John J. Callahan or William Wilken, NCSL Washington Staff, Education Committee, National Conference of State Legislatures, Hall of the States, 444 North Capitol Street, Washington, DC 20001; Gail Moran, Staff Director, Committee on Human Resources, National Governors' Conference, Hall of the States, 444 North Capitol Street, Washington, DC 20001; Wesley Apker, Executive Director, National Association of State Boards of Education, 810 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80295; or John W. Adams, Director of Federal-State Relations, Council of Chief State School Officers, 1201 16th Street, NW, Washington, DC 20036.

Sincerely,

Jerry Apodaca
Governor of New Mexico
Chairman,
Education Commission of the States

Grant L. Anderson

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Chairman, Committee on
Legislation
Council of Chief State School
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Dick Kneip

Richard Kneip
Governor of the State of South Dakota
Chairman, Human Resources Committee
National Governors' Conference

cc Members of the Subcommittee
Senator Williams

STATEMENT BY THE
AMERICAN CONGRESS OF REHABILITATION MEDICINE
AND
AMERICAN ACADEMY OF PHYSICAL MEDICINE & REHABILITATION

ON

Proposed Regulations for P.L. 94-142 Set Forth in Federal Register of
December 30, 1976

March 7, 1977

Submitted to: Senate Subcommittee on the Handicapped relative to its oversight hearings;

and

Submitted to: The Bureau of Education for the Handicapped pursuant to a request in the Federal Register of December 30, 1976.

By: Richard E. Verville, Counsel
American Congress of Rehab. Medicine and American Academy of Physical Medicine and Rehab.

We regret that these comments are one week late, but the process of soliciting reactions from people in our two organizations was time consuming. A brief memorandum outlining the general issues which we are concerned about was submitted to you on January 10, however. These official comments are in more detail and directly relate to specific material in the proposed regulations.

The American Congress of Rehabilitation Medicine ("ACRM") and American Academy of Physical Medicine & Rehabilitation ("AAPM&R") are associations of professionals in the field of medical rehabilitation. The ACRM is a multi-disciplinary, 2500 member association of physicians, psychologists, nurses, speech pathologists, physical therapists, occupational therapists, social workers and rehabilitation counselors, all specializing in rehabilitation medicine. The AAPM&R is a 1000 member organization of board-certified physician specialists in physical medicine and rehabilitation. The professionals in both organizations are actively involved in the health care programs which provide mental and physical restorative services to the physically handicapped including the neurologically impaired and multi-handicapped individuals. These programs are both inpatient and outpatient and some involve educational and vocational services. Our comments deal with the need for more specificity in the proposed regulations relating to the process for providing "related services", particularly medical rehabilitation services, and particularly the need for required involvement of medical rehabilitation personnel in the evaluation, supervision and delivery of medical rehabilitation services.

A. General Comment

The statute (P.L. 94-142) and the proposed regulations clearly establish that a state must assure the provision of spcial education and related services if it participates in the Federal-state grant-in-aid program authorized by P.L. 94-142. While the primary focus is upon special education services, related services including the full range of medical rehabilitation services are also required to be provided to each eligible handicapped child who needs such services. The Council for Exceptional Children, in its February 3, 1977 statement, at page 2, clearly identified this two-fold focus of the Act and correctly requested greater clarity in the definition of special education to eliminate confusion between the two service objectives and programs. We would like to suggest further methods of clarifying these two program areas, both of which are legal obligations of the states who participate in the education for handicapped children program authorized by P.L. 94-142.

Generally, the approach in the regulations is much too narrow with regard to testing, evaluation and service provision. The statute, supported by professional opinion, suggests that a much more comprehensive program for children was intended and is needed, looking to the full psychological and physical development of handicapped children where such development is clearly related to educational needs. For example, the Hobbs study indicates 10 variables important to intellectual growth including general health. That same study calls for "pluralistic" assessment of childrens' needs relative to intellectual development including screening for physical impairment, an inventory of health history and an assessment of adaptive behavior. See "Issues in the Classification of Children", Volume I, Jossey-Bass Publishers, San Francisco, Calif., 1975, pages 150 and 197 relative to both points cited above. Our criticisms and comments which follow are intended to indicate areas of weakness in the regulations regarding the provision of comprehensive, high quality assessment and service programs and suggested methods for facilitating improved assessment and service delivery.

B. Specific Criticism of the Regulations

The provisions of the regulations dealing with state annual program plans, LEA applications, services, and evaluation for placement (Subparts B, C & E) do not provide requirements to assure the delivery of adequate "related services" and adequate assessment and evaluation services, particularly in areas of physical, psychological and social rehabilitation. The regulations imply that such related activities are to be carried out and that expert personnel and resources, including facilities, in these related areas will be utilized, but there is a total lack of specificity as to how needed non-educational services will be determined and delivered.

The proposed regulations require the state to describe the types of personnel other than educational personnel and types of facilities other than schools (e.g., hospitals, physical therapy clinics, etc.) necessary to meet the requirements of P.L. 94-142. Section 121 a 26. The LEA is required to do the same. Section 121 a 103. The state may designate an agency other than the educational agency to coordinate the planning and implementation of the law. Section 121 a 28. The state and local education agencies are required to "insure" that all parts of the program required by P.L. 94-142 are carried out but to administer only the educational program. See Sections 121 a 34, 121 a 100. The implication of the above is that other agencies may well administer the non-educational programs. The state and local education agencies are explicitly authorized to use whatever facilities, personnel or sources of public support necessary to carry out the intent of P.L. 94-142. Sections 121 a 201, and 121 a 241. These many provisions cited from the proposed regulations are appropriate and consistent with P.L. 94-142. In the Senate Report on P.L. 94-142, for example, there is specific reference to the need to utilize non-educational resources and programs such as rehabilitation and social services. There is also reference to services delivered in a hospital setting.

All of these provisions cited in the preceeding paragraph indicate an intent that there be cooperative arrangements between public schools and health and rehabilitation facilities and personnel to assure the delivery of appropriate "related services". Such arrangements appear to be authorized, yet the specifics are missing in the sections dealing with services and particularly with individualized education plans and placement evaluation procedures. The IEP regulations focus entirely on education services and personnel and lead the reader to conclude that there is to be no plan or specific program with specified objectives, services and evaluation in the area of "related services". Also, there is no requirement in the proposed regulations regarding the quality standards applicable to "related services" that are medical, medical rehabilitation, or health related. Clearly, education agencies do not have and are not qualified to develop service standards in these areas, but no alternative is spelled out in the regulations. The regulations must, at a minimum, assure that handicapped children receiving related services such as medical rehabilitation services are receiving services comparable to those received by others in the medical rehabilitation system.

The failure of these regulations to provide for the participation of medical, health care and psychological personnel in the development of program plans, evaluation activity, and the supervision and delivery of "related services" and the failure to establish appropriate standards for such services leaves the area of "related services" in limbo. Without correction, either one of the following two alternatives is likely to occur: no "related services" programs will be developed, or such service programs will be developed by personnel not equipped to provide appropriate quality services. In addition, the assessment and evaluation procedures are likely to be so narrow in focus that serious physical, psychological and related impairments to intellectual growth will not be detected. See Hobbs study cited above regarding justification for broad assessment strategies.

C. Suggested Changes

To strengthen these regulations in the areas of weakness described above and to establish appropriate assessment and service delivery programs for medical, medical rehabilitative, psychological and social programs, we suggest the following additions to the proposed regulations:

1. Section 121 a 27 describing the state plan should be changed to include a new provision - (c)(4):

"(c)(4) The arrangements with health care, rehabilitation and other providers and personnel required to deliver related services."

2. Section 121 a 103 describing the LEA application should be amended to add the following clause at the end thereof:

"including a description of the arrangements with health care, rehabilitation and other providers and professionals necessary to provide required related services in these areas."

3. Section 121 a 201 describing duties of the state to assure adequate services should be changed to include new subsections (d) and (e):

"(d) The state shall utilize available health care and rehabilitation providers of services, agencies and personnel to provide required related services in the areas of health and rehabilitative care and to establish appropriate standards for assessments and services in such areas."

"(e) Standards for related services involving health, rehabilitation and social service agencies, providers or personnel, shall be equivalent to the general standards of such agencies, providers and personnel which apply to others they serve."

4. Section 121 a 223 dealing with participation in formulating the IEP should be changed to provide a new subsection (c) and redesignate (c), (d), and (e) as (d), (e) and (f):

"(c) Appropriate physicians, other health care professionals and psychologists to determine the needs for and necessary provision of related services."

5. Section 121 a 225 describing the individualized education program should be changed to add a new subsection (j) and to strike the reference to "related services" in (d)(1):

"(j) A statement of the need for medical, health, psychological and other related services, the objectives to be achieved in the provision of such services, the particular services to be provided, and a process and criteria for evaluating progress of the child at necessary intervals."

6. Section 121 a 432(b) dealing with testing should be changed to read as follows:

"(b) Tests and other evaluation procedures should be comprehensive, not merely a test of intelligence quotient, and should assess, among other things, academic needs, health and nutrition needs, the presence of disability, adaptive behavior, and cultural and language disadvantage."

7. Section 121 a 551 describing the membership on the state advisory panel should be amended to add a new subsection (f):

"(f) Professionals and administrators representing providers of related services such as physicians, psychologists, nurses, speech pathologists, physical and occupational therapists, social workers and rehabilitation counselors."

D. Conclusion

We appreciate this opportunity to present our views on P.L. 94-142 and proposed regulations thereunder. We feel very

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strongly that all the suggestions we have made are important and will strengthen the regulations decidedly. Without these changes, it is our opinion that the proposed regulations do not adequately carry out the intent of P.L. 94-142 to assure the delivery of special education and related services. Without such changes, school officials and teachers are likely to undertake the provision of services which they are ill equipped to provide and which, in the case of medicine and most medical rehabilitation services, they are not licensed to provide under state law. Clearly, the Congress did not intend to (and probably could not) establish a program which would be contrary to state laws regarding the licensing and certification of professionals providing highly important personal and health related services. Clearly, Congress did intend that handicapped children be assured the provision of a range of services necessary to educational development provided with quality equivalent to the quality of such health and rehabilitation services provided to other handicapped individuals.

3/3/77

1930 Elderwood Drive
Martinez, California
February 26,1977

The Honorable Jennings Randolph
Chairman: Sub-Committee on Handicapped
Attention: Betty Griffin
10-B Russel Senate Office Building
Washington D.C. 20515

Dear Honorable Jennings Randolph,

I am a Speech Pathologist employeed by the Mt. Diablo Unified School District in Concord, California. I am very concerned about some of the wording contained in Public Law 94-142, in the section dealing with Education of Handicapped Children and Incentive Grants Program.

In section 121a.4Definitions sub-catagory (h) "Speech Impaired" reads as follows ..."means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's educational performance." This definition does not consider how these disorders may affect one's attitude or one's feeling of self worth, eventhough they may not affect his/her educational performance. Therefore, the inclusion of a statement that deals with how these disorders may adversely affect one's attitude, self-image, or feeling of self-worth, should be included. This inclusion would insure that communicatively handicapped students would not be denied speech therapy and or related services because the disorder does not interfear with one's educational performance.

In section 121a.4 (1) "Speech Pathology" means ... . To make this a more functional definition it should be "Speech Pathology Services" means ... . This change would make the definition more accurate and descriptive. Also, in this definition there is no mention of prevention. Much of the work done in the field of speech pathology is designed to be preventative. Therefore, if the inclusion of the word prevention were added to paragraph (4) so that it were to read: (4) Provision of speech and language prevention and habilitation services. This would approopriately account for a more accurate description of speech pathology services.

In section 121a.4 Definitions "Special Education" in this definition there is no mention of special equipment that maybe necessary to properly educate a handicapped child. The definition must provide for such special equipment as well as specially designed instruction. If all children are to be treated equally and provided with the appropriate education, then they must be provided with the equipment necessary for their education. This special equipment may include glasses, wheel chairs, hearing aids, to mention a few. Further, this equipment should be provided at no cost to parents or legal gardians so that even a handicapped child may receive a free public education.

In section 121a.263 Inservice training (e) (1) the use of the word teacher is too restrictive. The wording should be more inclusive, so that all personnel are available to use the incentives to help insure participation in inservice training programs. I am not a teacher in the traditional meaning, therefore a more inclusive term such as personnel would be more appropriate.

Thank you for considering these recommended changes. These changes and all of Public Law 94-142 will have a significant effect on all public and private schools providing special education and related services to communicatively handicapped students. Therefore, the most accurate and functional regulations must be developed.

Sincerely,

Richard R. Outman
Speech Pathologist

c.c, Congressman George Miller

MAR 8 1977

5806-82 Merton Court
Alexandria, Va. 22311
March 3, 1977

The Honorable Jennings Randolph
5121 Dirksen Senate Office Building
Washington, D.C. 20510

Received
Date 3/9/77
Subcommittee on
The Handicapped

Sir:

I read, with considerable interest, the article (enclosed) in the Sunday February 13, Washington Post on hearing aids. The sound processing technique applied to hearing aids by two British researchers appears to be just what I need.

My hearing problem, moderate to severe bilateral nerve loss of hearing, is bad and seems to be getting worse. I'm 28, and employed as Staff Forester, Chesapeake Division, Naval Facilities Engineering Command. My partial hearing capability frequently causes me considerable difficulty and frustration during routine in person and telephone communications.

Although I'm reasonably intelligent and well schooled (M.F. Yale School of Forestry and Environmental Studies) many people, even some work associates, don't understand the problem and assume I'm not-too-bright, inattentive, or worse unfriendly and snobbish. After all, I wear two hearing aids. We're talking louder than normal. Don't eyeglasses adequately restore vision to near-blind people?

I would sincerely appreciate your support of proposed or in-progress research and development towards making this new type of hearing aid available to the many thousands of Americans who suffer similar hearing difficulty or deafness. Countless careers and meaningful lives may be saved by the application of present electronics-- Space Age technology to hearing aid design as soon as possible. I hope to remain a productive member of society for quite some time. Please help.

Thank you.

Sincerely yours,

Dennis R. Perham

Dennis R. Perham

[From the Washington Post, Sunday, Feb. 13, 1977]

Hearing Aids

By Colin Tudge

London Observer

London—British researchers have come up with a revolutionary technique in hearing-aid technology that could bring new hope to the deaf.

Hearing aids that simply amplify all sound can be so noisy that they may damage the already offended ear. Amplification must be selective: In particular, it should emphasize the softer sounds that make speech intelligible, without making the louder components intolerable, and without distorting sound quality.

An impossibly tall order apparently, but Richard Gregory and A.E. Drysdale of Bristol University have conquered the problem by applying a sound processing technique pioneered by radio engineers, and known as "high frequency carrier clipping."

Hearing aid designers face a Gordian complex of paradoxes. First, it is the consonants rather than the vowels that make speech intelligible; if this were not so, a different accent would be a different language. But the consonants are quiet, with some, like "s" and the unvoiced "th," almost silent; the almost irrelevant vowels are many times louder. Thus the most crucial components of speech are also the most difficult to hear; and thus, an indiscriminate amplifier that made the consonants audible to a deaf person would raise the corresponding vowels to the noise level of a jet aircraft.

There are two standard ways to solve this problem, but neither is satisfactory. First, the amplifier may simply cut off when the sound reaches an unacceptable level; but this crude method of "clipping" distorts the sound. More subtle is "amplitude compression," whereby the amplifier begins to cut out before the sound reaches unacceptable levels, and then gradually returns to full sensitivity as the excessive sounds begin to die down.

The Gregory-Drysdale technique also involves "clipping," but it pushes the distortions produced by this process outside the audible range.

In Gregory's and Drysdale's new hearing aids, the sound of speech is superimposed on a very high frequency carrier, well outside the audible range. And only then are the wild fluctuations in amplitude within the speech sound waves clipped.

So far the technique remains experimental, but it has worked well in partially hearing schoolchildren, and among some deaf adults in Bristol.

Senator STAFFORD. So at this point the meeting of the Subcommittee on the Handicapped is adjourned until 9:30 tomorrow morning.

[Whereupon, at 12:15 p.m., the subcommittee adjourned, to reconvene at 9:30 a.m., on Friday, February 25, 1977.]

REVIEW OF PROGRAMS FOR THE HANDICAPPED

FRIDAY, FEBRUARY 25, 1977

U.S. SENATE,
SUBCOMMITTEE ON THE HANDICAPPED
OF THE COMMITTEE ON HUMAN RESOURCES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:40 a.m., in room 4232, Dirksen Senate Office Building, Senator Jennings Randolph (chairman of the subcommittee), presiding.

Present: Senators Randolph, Javits, and Stafford.

Senator RANDOLPH. A pleasant morning to all of our guests and to those who will testify.

I shall not make a comment at this point but will do so a little later.

Our first witness is well known, of course, to all of the members of the Subcommittee on the Handicapped and to all the members of the Committee on Human Resources.

One of those constantly articulate, astute, and dedicated members of the full committee is with us this morning, Senator Jacob Javits, of New York.

Senator Javits, we appreciate that you have arranged your schedule to come by to present an individual whom you know as a leader in the work for the handicapped. I believe he is even a constituent of yours.

Senator JAVITS. Mr. Chairman, he is a very able man, really outstanding in his field.

He is president of the Human Resources Center in New York, Chairman of the White House Conference on the Handicapped and probably as much a leader in the field as there is.

His installations were looked over by the minority counsel for the committee who found that they are run in a very businesslike way and with all the highest standards.

This has been the central theme of Henry Viscardi's life.

He has a most illustrative biography, honored by many universities, and many other public institutions for exemplary work in this field, which goes back now well over three decades.

It is an honor for my State that he not only is a New Yorker, which we are proud of, but he also works in our State, and the things that he leads to be done in our State are done in our State.

It is extremely gratifying to us.

Also, Mr. Chairman, one last thing which is very characteristic of the man. In all his efforts in the field of the handicapped, he has sought to be an exemplar so that others may follow; and indeed others have followed.

That, it seems to me, is the very top flight of work in this particular field, that one should do so well in terms of performance as to be an example to others and an example which others can, and do, accept as a standard in the field.

So, I present Dr. Viscardi to the subcommittee with great pride and great pleasure as a son of New York. We are extremely proud.

I ask unanimous consent that as part of my remarks there may be included a biography of Dr. Viscardi which lists some of the distinctions and awards that he has earned by his outstanding service.

Thank you.

Senator **Randolph**. Thank you, Senator Javits.

Senator **Javits**. While I have the floor, as I cannot stay too long, may I take this opportunity to present to the committee another witness, Gordon Williamson, a consultant in speech education and occupational therapy at Columbia University, an educator of whom we are very proud in New York.

He will be testifying later.

Senator **Randolph**. Yes, thank you, Senator Javits.

The material you wish to include in the record will be made a part of the record at this point.

[The biography of Dr. Viscardi follows:]

BIOGRAPHY

HENRY VISCARDI, JR.

BORN: May 10, 1912, New York, New York

PARENTS: Henry and Anna (Esposito)

WIFE: Lucile Darraq - Married November 16, 1946

CHILDREN: Lucile, Lydia (Mrs. James Weisman), Donna (Mrs. Patrick Shooltz), Nina (Mrs. Brian Sharkey)

HOME ADDRESS: 305 Steamboat Road, Kings Point, Long Island, New York 11204

CURRENT POSITIONS:

Founder and Member of the Board of Trustees, Abilities Inc., Albertson, N.Y.
President and Member of the Board of Trustees, Human Resources School
President and Member of the Board of Governors, Human Resources Center
Executive Vice President and Member of the Board of Directors of Just One Break (JOB) Inc.

BOARD OF DIRECTORS:

Executive Life Insurance Company of New York
The Roslyn Savings Bank
Old Northern Company, Ltd.

COMMITTEES:

Executive Committee of the President's Committee on Employment of the Handicapped

Advisory Council of New York State Legislature's Select Committee on Mental & Physical Handicap

Member of Commissioner's Advisory Council for Children with Handicapping Conditions

Member and Chairman of the National Planning & Advisory Council to the White House Conference on Handicapped Individuals of the Office of Human Development

TEACHING AFFILIATION:

Assistant Professor of Clinical Rehabilitation Medicine, New York University Medical Center

CLUB MEMBERSHIPS:

Metropolitan Club
Port Washington Yacht Club
North Hempstead Country Club
Overseas Press Club
Royal Society of Arts
Newcomen Society
Marco Polo Club
Overseas Yacht Club

HONORARY DEGREES:

Doctor of Laws, Fordham University
Doctor of Laws, Long Island University
Doctor of Humane Letters, Manhattanville College of the Sacred Heart
Doctor of Humane Letters, Hofstra University
Doctor of Literature, Sung Kyun Kwan University, Seoul, Korea
Doctor of Science, Clarkson College of Technology, Potsdam, N.Y.
Doctor of Humane Letters, Ohio University
Doctor of Humane Letters, University of Bridgeport
Doctor of Humane Letters, Pfeiffer College

CITATIONS & AWARDS:

Named Citizen of the Year in June 1953 with Bernard Baruch by the Junior Order, United American Mechanics

Presidential Citation in August 1954 for outstanding work on President Eisenhower's Committee for the Employment of the Physically Handicapped

Citation for Outstanding Service from the American Medical Association, June 1957

The Signum Fidei Medal from LaSalle College Alumni Association as the person who has done "the most to foster Christian principles" for the year 1957

The first "Gold Knight of Management" award from the National Management Association for outstanding achievement in industrial management, March 1958

Citizen of the Year Award from the Sports Lodge of B'Nai B'rith, January 1960

International Boss of the Year Award from the National Secretaries Association International, April 1960

Golden Plate Award from the Academy of Achievement for outstanding work in the rehabilitation of the physically handicapped, September 1961

The Lighthouse Award for distinguished service to blind people, October 1961

Award for Achievement in Rehabilitation from the Franklin Roosevelt Veterans Administration Hospital, Montrose, N.Y. , May 1962

Petream Medal of St. Peter's College, Jersey City, N.J. for outstanding leadership in human endeavor, June 1962

B'Nai B'rith Citizen of the Year Award for 1962. Presented by Great Neck Lodge on November 28, 1962

International Humanity Service Award, American Overseas Association, July 1964

Thanksgiving Award, Clarke College, Dubuque, Iowa, 1964

The Silver Medal of the City of Paris, Paris, France, October 1965

CITATIONS & AWARDS, Cont'd.

Hofstra University Education Award for services and leadership toward improved educational opportunities for children, December 1965

Medal of Japan from the Governor of Tokyo, 1966

Distinguished Social Service Award from Sophia University in Tokyo, 1966

Citation for Outstanding Service from Sogang College in Seoul, Korea, 1966

The Theodore Roosevelt Distinguished Service Medal, 1966

The Annual Award of the Nassau Neuropsychiatric Society, 1966

Citation for Significant Contributions to the Welfare of All People from the New Hyde Park Lodge of B'Nai B'rith, 1967

Amvets Silver Helmet Award, 1969

Distinguished Citizen's Award, Dowling College , 1969

Henry Viscardi, Jr. Scholarship, Molloy College, 1970

Benjamin Franklin Fellow of the Royal Society of Arts, London, England, 1970

Antonio R. Rizzuto Award, Unico National Convention, Los Angeles, Calif.,1970

Achievement Award, Italian Dental Society, New York, 1972

American Exemplar Medal, Freedom Foundation at Valley Forge, 1972

Gilbreth Medal, Society for Advancement of Management, 1972

Commissioner's Award from Rehabilitation Services Administration (Dept. of Health, Education & Welfare) - Certificate for outstanding leadership and cooperation in the development and placement of the handicapped through Projects With Industry, 1973

James E. Allen, Jr. Memorial Award, New York State Board of Regents, 1975

Marion Mill Preminger Award, President's Committee on Employment of the Handicapped, 1975

Saint la Salle Medal, Manhattan College, 1975

National President's Award Medal, National Rehabilitation Association, Cincinnati, Ohio, 1975

Lincoln Day Award, 1975

HENRY VISCARDI,JR.

"Attitudes of industry, the public and the disabled themselves have markedly changed during the past few years since Henry and a small group who believe in this philosophy have been carrying the torch.

"Because through medical skill, training, courage and spirit, Henry conquered his disability, thousands of disabled people are at work today who otherwise would have been sitting in back bedrooms or on street corners.

"His life and work are an inspiration to all of us, and when you look into his eyes, you know that here is a happy and complete man."

....Howard A. Rusk, M.D.

"Henry Viscardi was born under a cruel handicap. Most men would have been doomed by it to lives of misery and despair. He refused, however, to be consigned to humanity's scrap heap. He fought, with a courage that must fill the most impersonal heart with boundless admiration, to conquer the terrible disability and he won...."

....Bernard M. Baruch

"The story Henry Viscardi tells is without equal in terms of its revelation in the strength of the human spirit and the dignity of man."

....Judith Crist

PUBLICATIONS

BOOKS

" A Man's Stature" - John Day Company - 1952
An autobiography with a foreward by Bernard Baruch

" Give Us the Tools" - Paul S. Eriksson, Inc. - 1959
The story of the founding of Abilities, Inc.

" A Laughter in the Lonely Night" - Paul S. Eriksson, Inc. - 1961
Individual sotries of the valiant men and women employed at Abilities, Inc.

" A Letter to Jimmy" - Paul S. Eriksson, Inc. - 1961
A series of letters and friendly counsel to a crippled child.

"The School" - Paul S. Eriksson, Inc. - 1964 Story of the founding of a school for severely disabled children.

"The Abilities Story" - Paul S. Eriksson, Inc. - 1967
An account of the struggle of disabled people in a successful endeavor to support themselves through work.

"But Not on Our Block" - Paul S. Eriksson, Inc. - 1971
Story of Dr. Viscardi's struggle to build a new addition to his school against protests of suburban neighbors.

"The Phoenix Child" - Paul S. Eriksson, Inc. - 1975
On the rehabilitation of a handicapped boy.

ARTICLES

Numerous magazine articles and technical papers on the rehabilitation of the disabled. These have been published in a variety of national and international magazines and journals, both in the United States and abroad. These publications appear in approximately 26 languages.

Senator **Randolph**. I think I will note today for our record that even though I did not have the opportunity to watch the Frank Reynolds ABC coverage last night of our hearing yesterday, I want to thank ABC for an excellent presentation. ABC did not show just a shot or two, but instead devoted enough time to give to a wide audience the opportunity to learn of these hearings and to point out that although these hearings may not have the dramatic impact of other hearings, they are nevertheless vitally important and of great interest and concern to us all.

I am told that ABC really helped focus attention on the contributions the handicapped themselves are making to our society.

It was a rather exciting program from what I have heard by those who have telephoned me from Florida and one or two other places earlier this morning.

Somehow or other I hope I can see that program.

But the handicapped themselves are participating in the hearing, and that is what is important, not that others of us who are carrying on as members of the subcommittee are involved.

Again, we have the involvement this morning of a gentleman who has given knowledgeable leadership through the years.

This is the fourth day of our hearings and the subcommittee is going to receive testimony from organizations and individuals, individuals such as Dr. Stilwell from Morgantown, W. Va.

I will just mention him today because of his contributions; he is a blind man who is helping so many, many people by the work he is undertaking.

But there is a wide variety of issues we know, Dr. Viscardi—and you are sitting at the table ready to testify—that relate to the matters that are constant and those that are changing.

You are Chairman of the White House Conference on Handicapped Individuals, and that Conference will address itself to these many issues which continue to surface from time to time.

We are delighted that you are here today and that Mrs. Viscardi is with you. Would you stand, Mrs. Viscardi?

[Mrs. Viscardi stood.]

Senator **Randolph**. We know of your continuing interest and help, and we are appreciative. Will you proceed, Dr. Viscardi?

Senator **Javits**. Will the Chair yield for 1 second before the witness starts.

I would like you to know that all of us have recognized through the years the extraordinary dedication of Jennings Randolph to this cause, the extraordinary ability as shown by the very comprehensive bill passed last year to implement his views, the tremendous prestige he enjoys in the Senate which gains him the ability to develop and get enacted critically important legislation in the field of the handicapped and also the extraordinary quality of humility and self-effacement, which was so well portrayed by ABC last night.

Senators are not known to be self-effacing, and Jennings Randolph is not a man who has any hangup about that, but he has a fine taste to know the subject speaks more eloquently than any of us can, and in that way he has rendered, I think, far more than a service that duty calls for to the handicapped. I would like to pay my tribute.

Senator **Randolph**. Thank you very much. My colleague is too generous, but I am grateful. Dr. Viscardi.

STATEMENT OF DR. HENRY VISCARDI, JR., CHAIRMAN, WHITE HOUSE CONFERENCE ON HANDICAPPED INDIVIDUALS, ALBERTSON, N.Y.

Dr. VISCARDI. I know Senator Javits has to leave.

I would ask your indulgence to thank him for the privilege of making a personal reference, which I would like him to hear before he goes.

Senator, I was born without legs, and I have lived all my life with disability.

I know all there is to be known from personal experience, the pity, the pain, the frustration and disillusionment, as a handicapped child and through the adult period of my life.

I would like you to know that I have great faith that this system, in this great Republic, in democracy, can solve the problems of our millions of disabled Americans. Part of it is based on a simple explanation which my immigrant mother gave me when I was a child. Because I asked her as a child, why was I born this way? Why me? And in her simple peasant wisdom, she told me that when it was time for another crippled boy to be born in the world, the Lord and his counsels held a meeting to decide where he should be sent, and the Lord said: "I think that the Viscardi's would be a good family for a crippled boy."

I feel that way about this committee and this great country of ours.

The greatest technological Nation in the history of the world is probably increasing its population of disabled people because of its advancement in medicine and science; and if that is true, then no greater laboratory could have been provided for us, to find a solution for the absorption of these millions of disabled people into the productive stream of our economy.

I am grateful to you, Senator, that you would come this morning to introduce me, and I thank you for doing so.

Senator JAVITS. I thank you for letting me hear those words.

Senator RANDOLPH. Dr. Viscardi, I am sure that you will permit me just approximately 1½ minutes of a recess. Would you do that?

Dr. VISCARDI. Yes, Senator, I will be glad to.

[Recess.]

Senator RANDOLPH. Dr. Viscardi.

Dr. VISCARDI. Mr. Chairman and members of the subcommittee, I am Henry Viscardi, Jr., Chairman of the National Planning and Advisory Council of the White House Conference on Handicapped Individuals.

This responsibility is, of course, in addition to my full-time position as the president of the Human Resources Center in Albertson, Long Island, N.Y.

I am pleased to have this opportunity to appear before the subcommittee on behalf of the Council members and staff of the White House Conference.

I have with me today two members of the White House Conference staff: Mr. Wallace K. Babington and Dr. Paul Ackerman.

I have submitted a formal prepared statement for the record. I would like, however, to discuss briefly some of the highlights of that narrative which has already been submitted.

We have held conferences in each State and territory in our country.

I believe, Senator, that it will interest you to know that the White House Conference has expended $980,000 of the appropriated sum for the purpose of State and territorial conferences, but we estimate that $1,700,000 has been expended in State funds and services to match this.

I'm deeply moved by the fact that in many States not only have there been State conferences, but a wide variety of regional conferences.

In West Virginia, for example, there were seven regional meetings.

I was the speaker at the final meeting. To me it was significant that the Governor attended that meeting and addressed the delegates. Members of the State legislature also attended.

I am pleased to report that 47 of the State conference directors are disabled individuals. I find that there has been dialogue in the States which never occurred before.

People have come from one region of the State to find that there were people in another region presenting a different type of disability, and they had never met, but they shared a common cause.

I am pleased to report that State conferences have considered issues and made recommendations on 25 topical areas which will be delivered at the White House Conference and voted on after discussion when the meeting is held here in the Nation's Capital in May.

The reports from these States have the careful consideration of the delegates who determine the agenda of the National Conference.

I find that there are a whole variety of concerns; among these are the attitudes of the general public, and the elimination of barriers to employment.

It is interesting to me that the economic phase is affecting the life of the disabled individuals and is probably the most important problem that has arisen in these discussions in the States.

I find there is a need for a change. There is a need for more access to public buildings. Special concerns and problems of the severe and multiple handicapped must be faced: service delivery systems need to be overhauled and updated. These issues are on the minds of the delegates throughout the States.

There are two unique features of this White House Conference.

In designing it we felt that it was essential to take it out into all sections of the Nation, that it must not just be held here in Washington with the delegates coming to a White House Conference. This involvement at the community level is essential in order to bring forth the issues.

And I am pleased to report that there has been consumer involvement in all of these deliberations.

Seventy percent of the persons who attended the regional and State conferences are handicapped individuals.

I am pleased to report that we have attempted to follow this in staffing the White House Conference. To date, of the Conference delegates who will come to the Nation's Capital on the 23d of May for the White House Conference itself, 85 percent of those delegates are handicapped individuals.

The remainder is made up of parents of handicapped individuals and providers of professional services.

I believe that never before has such an opportunity for handicapped persons been provided to be heard at every level.

This is, I wish to assure you, Mr. Chairman and the committee, a consumer conference.

I wish also to report on an interesting and unique feature of the White House Conference. Since the economic aspects of the life of disabled individuals is so important to the disabled people of our Nation, we have formed to support the White House Conference an Industry-Labor Council.

The cochairmen of that Industry-Labor Council of the White House Conference are Mr. George Meany, president of the AFL–CIO, and Mr. John Opel, president of IBM Corp.

The Vice Chairmen of the Council are Mr. Dean Swift, the president of Sears, Roebuck, and Mr. Charles Pillard, president of International Brotherhood of Electrical Workers.

I am amazed at the attitude of the industry and labor representatives who have come together for the first time to honestly discuss the problems in hiring disabled people faced in the industry-labor relationship.

We have already held four meetings of this Industry-Labor Council. The first was here in Washington, which was addressed by the Cabinet officers, and attended by the captains of industry and labor, sitting side by side.

To me it was heartwarming to see the chief executive of Dupont sitting next to the president of the Electrical Workers Union.

It was agreed there would be four regional conferences held.

The first was held in Chicago.

The second was held in Stanford Research Institute in Palo Atio, Calif.

This week, the third was held at the University of Georgia, in Atlanta.

The fourth conference will be held at the Human Resources Center Campus in New York the 16th of March.

This will be the final conference, but it will not be the end of the industry-labor involvement on this issue.

A segment of the Industry-Labor Council will be delegates to the White House Conference and present a report of their findings.

A report of the Industry-Labor Council will be prepared and distributed throughout this country.

It is amazing for me to be able to observe the issues. For the first time, men in the labor movement have recognized that the seniority regulations may be preventing disabled people from working at their jobs.

For the first time, American industry has honestly stated that they have problems because there are no standards on workmen's compensation.

For the first time, we have heard it openly stated at these meetings that employee benefits programs of such value to workers in America may be precluding the employment of disabled people in American industry.

And throughout the deliberations of this Industry-Labor Council a constant theme is recurring, and that is that this dialogue must be continued and solutions to these problems must be reached.

We must find a way, after surfacing these problems at meetings of this Industry-Labor Council, to solve those problems.

Among the recommendations that have come from the three regional meetings held so far is the request that there should be a mechanism for the continuance of this dialogue and the research and techniques with which they can answer the problems so that more disabled people can work in our country.

There has been a significant indication that some form of a national center should be established, one that can attack each of these issues as they arise and attempt to solve them, not only through legislation but through regulations involved in the labor-management relationship, and in the establishment of benefits for employees of our country.

Finally, Mr. Chairman, I would like to comment on implementation of the White House Conference recommendations.

The White House Conference will only be significant if we follow through on recommendations that the Conference makes.

I am pleased that the law establishing the White House Conference was prudent enough to recommend a period of 120 days beyond the White House Conference itself, during which the National Advisory Council and the chairman would have an opportunity to submit not only the report to the President and to the Congress, but to follow through with an implementation plan.

I believe that all the consumer input that we will have into the White House Conference will not be the end of the work of the Conference, that the staff and the Council will continue working with the administration after the Conference is over, to develop an implementation plan that we will submit to you and to the President.

That plan is required by the law that called for the Conference itself.

I am pleased that Congress, in its wisdom, saw the necessity to follow through on the recommendations that evolved from the Conference.

The input for the implementation plan will come from Federal agencies, from national organizations and seminars sponsored by the Conference.

The strategies used in the plan will include overall organization to accomplish implementation along with specific steps for individual recommendations.

But, Senator, successful implementation of these recommendations will depend on the level of commitment of handicapped persons themselves; it will depend on the new administration and its attitude toward these recommendations, and it will depend on the Congress itself.

Judging from past experiences with the Congress, I have no doubt about your commitment to the well-being of our handicapped citizens, and I must say that I am greatly pleased by the attitude of the new administration toward the problems of the White House Conference and in their efforts to support the Conference itself.

I could not be more pleased with the attitude of this administration in the short term that they have been in office toward helping us solve our problems.

I would like to think, Mr. Chairman, that there might be the possibility of a high-level coordinator working under the Secretary of Health, Education, and Welfare, who might be an ombudsman type to coordinate the work of the Federal and private agencies and the implementation of the recommendations of the White House Conference as we wrap it up.

I am grateful for the opportunity to testify before this committee.

As I have said on many occasions, Mr. Chairman, I am grateful for the attitude of you, personally, and of this committee, toward the problems of millions of disabled Americans.

I am one who believes very firmly, sir, that there are millions of disabled Americans who prefer the challenges of life to guaranteed assistance, the thrill of individual fulfillment to the stale calm of some subsidized Utopia.

I know you share these beliefs with me.

I hope through the mechanism of the White House Conference to give these individuals an opportunity to support themselves instead of being supported.

I would like to indicate this: That the handicapped of our Nation are behind in all areas.

They are behind in education, they are behind in number of individuals who go to our colleges and universities, and they have a far greater unemployment record than the non-handicapped.

In fact, 42 percent of the handicapped of working age who are not in institutions are employed compared to 59 percent of the average population.

That is a difference of 17 percent or 2 million persons in our Nation.

Do you know what would happen if we could employ these people even at $5,000 a year?

It would mean $10,500,000,000 per year added to the economy by wage earners and taxpayers and probably would save an equal amount in the support that they would be receiving from their families or from the community.

I would like to add, sir, what it would bring to their lives in dignity and personal happiness to be able to support themselves and not be supported by others.

I have no further testimony, Senator, except I would like to indicate as I have to the people in American industry and labor, for whom we have held our meetings, that it is not only a matter of the individual who was born with congenital deformities or who was born with cerebral palsy. In head injuries alone, and these are housewives who trip down stairs or people injured in automobile accidents, we have 3 million people in our country and the annual cost to the Nation in care is $3 billion per year.

In strokes we have 2,500,000 Americans.

Senator, God forbid, that is you and I who could suffer from a stroke and not someone born with a disease—these individuals suffering from strokes are costing our country $12.5 billion per year in annual costs.

In spinal injuries we have 100,000 at a cost to the Nation of $500 million.

So I think there is very ample incentive in adjusting economic factors to support their limitations.

Finally, Senator, it is a personal matter with me, as you know.

I have been in many countries in this world, in most of them, but I prefer this one because of the opportunity it has given to me to be my own man and to support myself.

I hope, sir, that through the White House Conference we shall have an opportunity to bring this to many of our citizens, and I thank you for this opportunity to testify before you and before your committee.

Senator RANDOLPH. Dr. Viscardi, we are helped always when you come and counsel with the members of our subcommittee.

I wish the record to reflect that Senator Stafford, the ranking minority member of the subcommittee, who is so constant and helpful in all of these programs that we have undertaken, is this morning attending a hearing by the Veterans' Affairs Committee of which I am also a member, on the nomination of Mr. Cleland.

I am going to ask Pat—I do this very often—we get her into the act, you see—to tell you about the Veterans' Administrator selected by this administration. I am not speaking politically; I want you to know just who this man is that is being heard in our Veterans' Affairs Committee this morning, the man whose nomination has been sent by the President to be head of the Veterans' Administration.

Would you just tell them about him, Pat.

Mrs. FORSYTHE. Mr. Cleland is a Vietnam veteran who lost both legs and one arm. He has done a beautiful job of rehabilitating himself and is making a great contribution to the Veterans' Committee and I am sure will continue to do so at the Veterans' Administration.

Senator RANDOLPH. So there is the recognition, and this is a good opportunity to speak up. He is a young man, enthusiastic, capable, who moves about in a wheelchair, but is hard to beat in what is important.

Dr. VISCARDI. He and I have much in common, Senator.

Just now we approached the season of Lent, and I hope I have a chance to say this to him. I would like to remind the public audiences that here it is almost Easter and since I wear artificial limbs, I have not even changed my socks since Advent.

Senator RANDOLPH. We can do nothing about it.

These windows do not open.

[Laughter.]

Dr. VISCARDI. May I, in conclusion, leave for the record a very brief credo which was adopted many years ago by the disabled workers in our workshop in the Human Resources Center, which is called Abilities, Inc.

These are severely disabled people who are producing goods with a value of some $3 million to $4 million a year, while they support themselves in dignity.

This is the credo that they adopted in 1952, and it says:

I do not choose to be a common man.

It is my right to be uncommon—if I can.

I seek opportunity—not security.

I do not wish to be a kept citizen, humbled and dulled by having the State look after me.

I want to take the calculated risk; to dream and to build, to fail and to succeed.

I refuse to barter incentive for a dole.

I prefer the challenges of life to the guaranteed existence; the thrill of fulfillment to the stale calm of Utopia.

I will not trade freedom for beneficence nor my dignity for a handout.

I will never cower before my master nor bend to any threat; it is my heritage to stand erect, proud and unafraid; to think and act for myself, enjoy the benefit of my creations and to face the world boldly and say, this I have done.

For our disabled millions, for you and me, all this is what it means to be an American.

Thank you, Senator, for the privilege of giving this testimony.

Senator **Randolph.** Thank you, Dr. Viscardi.

Last year, during a discussion concerning the contributions of handicapped persons of the St. Paul Technical and Vocational Institute—located in St. Paul, Minn.—Vice President Mondale indicated that the initial 225 graduates had paid Federal income tax dollars on earnings that were $89,800 over and above the Federal funds that had been awarded to St. Paul Technical and Vocational Institute to provide training for deaf students. I am sure the tax paid by those persons was in excess of what it cost to give them the education in the Center.

What you have been saying is that the training, the participation, and the expertise of the handicapped contribute to the tax base of this country as well as to the lives of handicapped people.

Dr. **Viscardi.** That is correct.

Senator **Randolph.** Over and over again, we have that example. I thought it would be appropriate to mention it now.

You talked about the White House Conference and mentioned that when the Conference ends in May, and the people go home, the Conference will remain a living conference for 120 days. During that time those who have participated in the Conference will have continuing input into the report that is to be written. This is a departure from the usual practice, where the conference turns over to some other agency of the Government the actual writing of the report.

Dr. **Viscardi.** And the implementation.

Senator **Randolph.** Of course, that is actually what you are discussing.

This, I believe is the first White House Conference with that provision written into the law itself, and we believe it will point the way to what can and should be done.

Dr. **Viscardi.** In the State of New York the Governor has decreed there shall be ombudsmen for the handicapped and be State employees who operate out of the Governor's office.

Gov. George Wallace of Alabama has done likewise. And there is so much byproduct of the White House Conference—numerous State and regional conferences have occurred even before we hold the national conference itself, in May of this year.

Senator **Randolph.** I know the handicapped are working in your operation in New York.

How many handicapped persons are in the organization setting up the White House Conference?

Dr. **Viscardi.** Of the total 40 employees of the White House Conference, 20 of them are handicapped individuals.

That is half.

Senator **Randolph.** That is excellent.

Dr. **Viscardi.** I think that is pretty good, a high average.

Senator **Randolph**. Dr. Viscardi, you talked from your statement rather than read it.

This is helpful to us. The complete document that you have will be included in the record, so that everyone will have the opportunity to study your entire testimony.

You are thoughtful and know others must follow you this morning.

Your chairman has to be in another place sometime very soon.

Thank you very much.

We are helped and encouraged. We are challenged, and we have lighter hearts because you sit with us today.

Dr. **Viscardi**. Thank you.

[The prepared statement of Dr. Viscardi and material referred to follows:]

TESTIMONY

SENATE SUB-COMMITTEE ON THE HANDICAPPED
OVERSIGHT HEARINGS

HONORABLE JENNINGS RANDOLPH
CHAIRMAN

STATEMENT OF

DR. HENRY VISCARDI, JR.

CHAIRMAN

NATIONAL PLANNING AND ADVISORY COUNCIL
WHITE HOUSE CONFERENCE ON HANDICAPPED INDIVIDUALS

FEBRUARY 25, 1977

The White House Conference on Handicapped Individuals

(202) 382-3275
TTY (202) 382-3724

WHITE HOUSE CONFERENCE ON HANDICAPPED INDIVIDUALS

TESTIMONY TO THE SENATE SUBCOMMITTEE ON THE HANDICAPPED
February 25, 1977

The National Planning and Advisory Council and staff of the White House Conference on Handicapped Individuals and the more than 35 million physically and mentally handicapped Americans working with us, continue to remain excited about the awesome challenge and opportunity being presented to all handicapped citizens of this nation. We have joined together to work toward the achievement of the mission of this first White House Conference on Handicapped Individuals to be held May 23-27, 1977 in Washington, D. C.

Our mission is comprised of three objectives:

to provide a national assessment of the problems and potentials of individuals with mental or physical handicaps;

to generate a national awareness of these problems and potentials; and

to make recommendations to the President and Congress which, if implemented, will enable individuals with handicaps to live their lives independently, with dignity and with full participation in community life to the greatest degree possible.

This remarkable progress being made by the Conference since beginning officially in October 1975 is something of which we all are proud.

1832 M Street, N.W. / Suite 801 / Washington, D.C. 20036

BACKGROUND

The White House Conference on Handicapped Individuals was authorized by Public Law 93-516, the Vocational Rehabilitation Act of 1973, as amended in 1974. Title III of the Act declared, "It is of critical importance to this Nation that equality of opportunity, equal access to all aspects of society and equal rights guaranteed by the Constitution of the United States be provided to all individuals with handicaps."

The measure was passed and approved by both House and Senate in November 1974 and signed into Law by President Ford in December 1974. Title III, sections 300-306, P.L. 93-516, is referred to as the "White House Conference on Handicapped Individuals Act."

In accordance with the Act, the Secretary of Health, Education and Welfare appointed a 28-member National Planning and Advisory Council to the Conference in November 1975. This Council includes outstanding individuals with impressive backgrounds relating to problems arising from handicapping conditions. Among the Council members are educators, rehabilitation specialists, medical personnel, social workers, government officials, families of handicapped individuals and consumers.

As you know, I was appointed Chairman of the Council. Jack F. Smith, formerly Assistant Dean at the National Technical Institute for the Deaf at Rochester (New York) Institute of Technology, was appointed Executive Director of the White House Conference and is responsible for directing staff in planning the Conference in conjunction with the National Planning and Advisory Council.

Administrative responsibility for the Conference rests with the Department of Health, Education and Welfare. Federal agencies have been most responsive to the requests of the Secretary to cooperate fully with Conference requests for the detail of personnel and services. Of a total of [illegible] staff (11 of the 22 staff professionals are handicapped), 30 were detailed to the Conference from agencies within the Department of Health, Education and Welfare and other Federal agencies including: Veterans Administration, Department of Labor, General Services Administration, Department of Commerce, Office of Economic Opportunity, Department of Justice and Department of Defense-Navy.

STATE AND TERRITORIAL CONFERENCES

Preliminary to the National Conference, a series of State and Territorial Conferences were conducted between July-December 1976 to assist in determining the agenda and priorities of the National Conference. State Directors, 47 of whom are disabled, were appointed by Governors of every State and Territory to organize these Conferences with an emphasis on consumer involvement.

These State Conferences were designed to: establish Conference dialogue at the grassroots level; set agenda for action at the local, State and Federal levels; and afford the opportunity for wider participation, not only for its more democratic value, but also to help raise public awareness consistent with the goals of the Conference.

Federal grants to the 56 States and Territories totaled $980,000, with minimum grants being $10,000 and maximum grants being $25,000.

The States and Territories have completed their Conferences; reports indicate that the participants are satisfied that meaningful solutions to many of their concerns have been developed. Also, a new spirit of cooperation within States is a valuable by-product of the Conference that cannot be underestimated. It is estimated that more than 40 percent of those participating in State Conferences actually expressed themselves publicly for the first time. Many Governors and legislators also participated in the State Conferences and developed a new level of awareness. The impact already can be seen in the new program initiatives on behalf of the disabled in New York, Alabama, Kentucky and other States.

A major effort of the White House Conference has been to synthesize reports coming from the States. The purpose of the synthesis process is to prepare the agenda for the National Conference in May. This agenda will form the basis for Conference discussions which will prioritize recommendations under all issues in the 25 topical areas. Comprised of the material submitted by the States, this agenda is a collated and edited version of all material produced at the State and Territorial Conferences.

Among the major issues which surfaced at the State and Territorial Conferences were included elimination of disincentives to health needs and employment, enforcement of existing legislation, access to public information with respect to service delivery and the need to change attitudes through Public Awareness Programming.

Prior to, and in preparation for, the National Conference, a training meeting is planned for all State Directors in April 1977 in Washington, D. C. Since State Directors will lead their delegates, this session will be crucial to preparation for the White House Conference itself.

DELEGATE SELECTION PROCESS

Delegates to the National Conference will be representative of those individuals who have participated in the State Conferences. Guidelines for both delegate selection and numbers were sent to the Governors of every State and Territory and to the State Directors.

To ensure the 'consumer' aspect of the Conference, 50 percent of the 672 State delegates are to be disabled, 25 percent to be parents or guardians of handicapped individuals, with the remaining 25 percent to include others involved in research, business, labor, service delivery, medical, legal, advocacy and the broad variety of activities surrounding the needs and concerns of disabled persons.

State Directors have been encouraged to review all activities planned for their Conferences to ensure that mentally and physically handicapped individuals are fully involved and that consideration is given to such factors as urban/rural, economic, racial/ethnic and types of handicapping conditions to assure the maximum balance possible in establishing State delegations to the National Conference.

Each State and Territory is entitled to select the same number of alternates as they have delegates. Alternates may attend the Conference as observers or as voting delegates if official delegates are unable to attend.

Numbers of delegates have been allotted in relative proportion to a formula used to award grants to every State and Territory. The formula is based on each State's population and per capita income as compared with national population and per capita income. As figured by these formulas, 23 States will have 8 delegates; 10 States will have 12 delegates and 23 States will have 16 delegates.

In addition, invited as observers to the National Conference will be representatives of national consumer and provider organizations, members of Congress or their staff appointees, representatives of industry and labor and professionals working on behalf of disabled individuals, as well as international guests. The total size of the National Conference will be 3,000.

MAJOR CONFERENCE DOCUMENTS

To assist the States in understanding current thinking on the topics and issues that had been identified as being of national concern, 'Awareness Papers' were prepared, covering the five broad concern areas cited by Congress: Health, Education, Social, Economic and Special Concerns. These papers, written by experts in their respective fields, define the barriers faced by people with various handicaps and review what we already know about how those barriers can be overcome or minimized. They are intended to: spearhead the national assessment of problems faced by individuals with handicaps; provide a basis for discussion at State Conferences; provide a resource for local forums; aid in achieving the national awareness goal; give focus to the National Conference discussions and recommendations; and provide a framework for post-Conference activities.

State Conference Workbooks, containing guidelines and responsibilities of State delegates, plus summaries of the full 'Awareness Papers' and the issues which were used by States to assess problems and develop recommendations, were disseminated to all State Directors. States selected at least two issues from each of the 25 sets of issues and were at liberty to address more and to add issues with which they are particularly concerned. In this way, a true national assessment of the problems faced by handicapped individuals and recommendations for solving has been obtained. Most States are finding that many of the key issues identified at State Conferences are those originally identifed by the White House Conference.

Both the 'Awareness Papers' and the State Conference Workbooks have been shared with national organizations, Federal and State agency liaisons, directors of various State programs serving the handicapped and members of Congress and their staffs to ensure their continued involvement and support.

Every effort is being made to assure that no one disability group is left unaware of Conference discussions. The State Conference Workbooks and full 'Awareness Papers' were translated into Spanish and printed and disseminated to all State Conference Directors for use by their Spanish-speaking participants. Also, the Workbooks were brailled, recorded and disseminated nationwide.

Ongoing communication through Conference Newsletters and other documents is maintained with consumers, consumer organizations, national organizations working with and for the handicapped, the Congress and Federal and State agency liaisons and directors of programs to ensure involvement of all those individuals concerned with the problems and potentials of handicapped individuals.

NATIONAL CONFERENCE SITE

The White House Conference selected the Sheraton-Park Hotel in Washington, D. C. as the site of the National Conference scheduled May 23-27, 1977. The total attendance will be 3,000 persons, of whom at least 50 percent will be handicapped. The selection of the Sheraton-Park was based upon the willingness of its management to make any permanent renovations necessary for accessibility and full participation of all attendees. The hotel will accommodate all categories of disabilty in sufficient numbers to ensure that all delegates, alternates and observers will have suitable accommodations while in Washington.

NATIONAL CONFERENCE LOGISTICS

The eight-member Technical Evaluation Panel has selected Moshman Associates to be awarded the contract to assist with National Conference logistics. Among numerous reasons for the selection of Moshman Associates are the following: (1) submission of a technical proposal which significantly outscored other bidders; (2) demonstrated ability to provide effective logistics for a national conference within a relatively short period of time; (3) demonstrated experience in data processing; (4) thorough understanding of contract requirements; (5) a genuine sensitivity to the needs of the handicapped; and (6) fiscal responsibility and management.

PUBLIC AFFAIRS PROGRAM

National awareness of the issues and of the potentials of handicapped individuals is critical to the success of this Conference. The intent of the Public Affairs Program has been to: raise public consciousness concerning the Conference and its goals; raise public awareness of the Conference and of the problems and opportunities in overcoming physical and mental handicaps; support the communications activity in all other Conference objectives; and reinforce recommendations emanating from the Conference.

Our Public Affairs staff is regularly engaged in the preparation and nationwide dissemination of Conference Newsletters, press releases and bulletins to consumers, consumer organizations, national organizations working with and for the handicapped, the Congress and Federal and State agency liaisons and directors of programs to ensure involvement of all those individuals concerned with the problems and potentials of handicapped individuals. A bulletin has been disseminated to several thousand organizations serving the Spanish-speaking populace to familiarize them with the plans of the Conference.

A general information booklet has been printed for dissemination nationwide.

Our staff, on an ogoing and as-needed basis, assisted State Conference Directors with their public information programs and pre-Conference publicity. Photographs were arranged covering 15 various State Conferences for geographical representation.

We are currently working with Public Information Officers from various other Federal agencies to write and place feature articles in consumer and general-interest publications.

Six Public Service Announcements, each 30 seconds in length and professionally produced and contributed by Capital Cities Television Productions, have been disseminated to approximately 700 television stations across the country. They are designed to create awareness of and stimulate interest in State Conferences, future State activities, and the National Conference. The individuals who so graciously donated their time and talent are Wilma Rudolph, three-time medal winner of the Olympics, Beverly Sills, opera Star, and Patricia Neal, television/movie actress, Redskin football player Billy Kilmer, Rona Barrett, Hollywood columnist, and Dave Garroway, formerly of the "Today" show. All six PSAs are captioned for deaf individuals; Wilma Rudolph's PSA is also produced with voice over sound track in Spanish.

To stimulate awareness of the National Conference in May, three additional PSAs (also captioned for the deaf) will be disseminated in early Spring. They will feature Rona Barrett, arts and entertainment editor for "Good Morning America" and Hollywood columnist, Dave Garroway, noted television personality, and Billy Kilmer, Washington Redskins quarterback.

Our Public Affairs staff is currently planning network television and full media coverage for the National Conference, in addition to a television special on materials inherent in the Conference issues.

SEMINARS

In order to ensure the quality of input to the National Conference in areas which may not receive in-depth State attention, a number of White House Conference seminars is being planned. A recent seminar on Disabled Veterans, sponsored by Disabled American Veterans, included representation from all programs serving the disabled veteran. Other seminars have been conducted on Coordination of Service Delivery and Long-Term Care. The Office of Handicapped Individuals and Office of Developmental Disabilities were the respective seminar sponsors. A seminar on Special Populations, sponsored by Rehabilitation Services

Administration, has been conducted in the form of forums taken directly to minorities nationwide. The Urban League is conducting the forums for the White House Conference. This effort will ensure the participation of all minorities along with identifying individuals who should be invited to the Nation Conference.

CULTURAL PROGRAM

The Cultural Program staff is currently finalizing the program for Opening Night, arts exhibits and demonstrations by disabled artists and performers at the National Conference in May. The National Endowment for the Arts has sponsored a Task Force to work with the White House Conference to develop a 'full' demonstration of the arts by the handicapped at the National Conference. The Office of Education and Bureau of Education of the Handicapped will sponsor cultural demonstrations at the White House Conference.

INDUSTRY-LABOR COUNCIL

An Industry-Labor Council of the White House Conference was formed to spotlight national problems and opportunities in employment of handicapped individuals and to recommend actions for the Conference. The Council is co-chaired by Mr. George Meany, President of the AFL-CIO and Mr. John R. Opel, President of IBM Corporation. Mr. A. Dean Swift, President of Sears, Roebuck & Co. and Mr. Charles H. Pillard, President of the International Brotherhood of Electrical Workers, are co-vice chairmen.

Council membership is drawn nationwide from corporations and labor unions. The Council and its many sponsoring members from labor and industry will conduct various information/education activities, the chief of which will be four regional conferences. Member organizations will participate in activities leading to a formal report to the White House Conference, the President and the Congress. This report and the other activities of the Council will directly benefit the White House Conference by providing guidelines for the formation of national policies on the training and employment of handicapped individuals.

The Industry-Labor Council is expected to have a significant impact on the training and employment of the disabled long after the White House Conference is completed.

In three of the first four meetings, better than 600 representatives from industry and labor participated.

FINAL REPORT AND IMPLEMENTATION PLAN

The Final White House Conference Report to the President will offer very specific solutions to problems facing individuals with handicaps. This White House Conference also has an unprecedented opportunity: it is required by law to develop an Implementation Plan to the President and Congress to ensure Conference recommendations are followed up and executed.

Handicapped individuals are voicing a major theme nationwide... How can we assure the final recommendations of the White House Conference will be implemented? The legislation creating the White House Conference calls for us to develop the strategies for implementation and have the system in place to secure the strategies from both the public and private sector. Realistically, in the two and a half months we have to produce the plan, our focus will be based on major overall program planning and direction, new coordination efforts to improve service delivery to the disabled, and strategies for specific recommendations.

The unanswered question seems to be who will carry out the major task of developing full program, legislative and financial packages that are essential for full implementation.

With the need for greater focus on the entire service delivery picture for the disabled, and desire to insure specific planning previously mentioned, we would suggest a continuation of the White House Conference initiatives on the highest level possible. A special assistant to the Secretary of HEW who has a broad legislation and executive mandate is considered essential. Sufficient support is, of course, critical to a Conference followup.

It is also obvious that it will take both administrative and legislative commitment to ensure the White House Conference on Handicapped Individuals' recommendations are implemented.

The results of this first White House Conference on Handicapped Individuals will be new advances by and for all physically and mentally handicapped citizens of this nation. The Conference is an unprecedented example of how the abilities and capacities of handicapped individuals can be utilized to the fullest extent possible. Through these State and Territorial Conferences and the National Conference, this White House Conference will meet its challenge to develop recommendations to the President and Congress, which have an impact for decades on all areas of the lives and public and private programs that affect all individuals with mental and physical handicaps.

Finally, the White House Conference has met all deadlines as outlined in its master and monthly planning documents and executed its budget established by Congress. With only three months remaining until the National Conference, we face no major problems and are actively working toward and eagerly anticipating its successful completion and leadership in helping this nation's disabled gain greater independence, dignity and full participation in all areas of society.

Dr. Henry Viscardi
Chairman

Jack F. Smith
Executive Director

STATEMENT ON IMPLEMENTATION

The actual meeting of the White House Conference delegates in May will not be the end of work of the Conference; the Council and staff are to continue working after the Conference is over in order to develop an Implementation Plan that we will submit to you and the President. That Plan is required by the law calling for the Conference; the Congress in its wisdom saw the necessity for a follow through on the recommendations that evolve from the Conference itself.

Input for the Implementation Plan will come from the Federal agencies, national organizations and seminars sponsored through the Conference. The strategies used in the plan will include overall organization to accomplish implementation, along with specific steps related to individual recommendations.

Successful implementation of these recommendations will depend upon the level of committment of handicapped persons themselves, the new Administration and the Congress. Judging from past experiences with the Congress I have no doubt about your committment to the well being of all handicapped citizens.

INDUSTRY-LABOR COUNCIL

of The White House Conference on Handicapped Individuals

1111 20th Street, N.W. Room 636 Washington, D.C. 20036 • 202 653-5109

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DR. HENRY VISCARDI, JR
Chairman, White
HOUSE CONFERENCE

F A C T S H E E T

BACKGROUND & MISSION OF WHITE HOUSE CONFERENCE:

The White House Conference, established by Public Law 93-516, was signed into law by President Ford on December 6, 1974. Before the national meeting, May 23-29, 1977, a series of State conferences will be held to assist in determining the agenda and priorities of the national meeting. The Secretary of Health, Education and Welfare has appointed a 29-member National Planning & Advisory Council to the Conference. Council members include consumers, nationally known educators, rehabilitation specialists, medical personnel, social workers, government officials, and families of handicapped individuals. Eleven are handicapped. The National Planning & Advisory Council Chairman is Dr. Henry Viscardi, Jr.

The White House Conference missions are 1) to provide a national assessment of problems and potentials of individuals with mental or physical handicaps; 2) to generate a national awareness of these problems and potential; 3) to make recommendations to the President and Congress which, if implemented, will enable individuals with handicaps to live their lives independently, with dignity, and with participation in community life to the greatest degree possible. The Conference Executive Director is Jack Smith.

INDUSTRY-LABOR COUNCIL:

The Industry-Labor Council of the White House Conference on Handicapped Individuals was formed to spotlight national problems and opportunities in employment of handicapped people, and to recommend actions for the White House Conference.

MEMBERS:

Mr. George Meany, President of the AFL-CIO, and Mr. John R. Opel, President of the IBM Corporation, are Council Co-Chairmen. Mr. A. Dean Swift, President of Sears, Roebuck & Co., and Mr. Charles H. Pillard, International President of the International Brotherhood of Electrical Workers, are Co-Vice Chairmen.

The membership of the Council is drawn from corporations and labor unions which have demonstrated a special interest in the training and employment of handicapped individuals. The Council and its many sponsoring members from labor and industry will conduct various information/education activities, the chief of which will be the four regional conferences.

The Industry-Labor Council is affiliated with Assistance for Disabled Americans, Inc.

PURPOSE:

The member organizations will take part in the activities leading to a formal report to the White House Conference, the President, and the Congress. Deriving their value from the combined efforts of industry and labor at a policy level, this report and the other activities of the Council will directly benefit both labor and industry by providing guidelines for the formation of national policies on the training and employment of handicapped individuals. They will aid employers to continue to meet the affirmative action requirements of the Rehabilitation Act of 1973. They will aid labor unions by helping to clarify issues which must be resolved if this segment of our labor force is to be properly represented. They will aid the handicapped population and the country by helping to improve the climate of understanding and acceptance of handicapped workers. Such improved opportunities for employment will tend to increase the tax base for all levels of government.

REASON:

Handicapped Americans live in a country whose central political rhetoric talks about equal opportunity. For most people -- and especially for the handicapped -- the realization of that ideal has to begin with employment. Industry and Labor play a crucial role. Formation of this Council is an additional expression of an ongoing effort by Industry and Labor to translate the rhetoric to reality for handicapped people.

REGIONAL MEETINGS:

The Industry-Labor Council will conduct four regional meetings of about 200 participants each to provide companies and unions with a forum for the sharing of ideas, problems, and opportunities; and for preparing special recommendations in areas of interest to labor and industry for submission to the White House Conference, the President, and the Congress.

Ten Council members, five from labor and five from industry, will be official delegates to the White House Conference and will present the Council recommendations.

The regional meetings will take place at the University of Illinois Circle Center Campus Student Union on November 18, 1976; at the Stanford Research Institute, Menlo Park, Calif., on February 2, 1977; at the Georgia State University in Atlanta, Georgia, on February 23, 1977; and at the Human Resources Center, Albertson, Long Island, New York, on March 16, 1977.

REPORT:

A professional writer will prepare a formal report of the meetings for printing and distribution to public and private sectors of society and to Congress, Governors, Mayors and policy makers in business, industry, and labor, as well as associations, agencies, and organizations interested in handicapped individuals.

STAFF:

The former Executive Secretary of the President's Committee on Employment of Handicapped, William P. McCahill, has been retained as Executive Director of the Council. Norman C. Hammond has been loaned to the Council by IBM President John R. Opel. Staff members of the President's Committee and the White House Conference have been designated as liaison to the Council to provide backup support from the Federal Government when needed. Wallace K. Babington of the White House Conference on Handicapped Individuals is Dr. Viscardi's Council representative. The Council Planning Committee includes representatives of the AFL-CIO, the IBEW, Sears, IBM, the President's Committee, and the White House Conference.

LIAISON:

Each Council member, generally a senior representative of his union or company, has designated a personal representative to function as a working member of the team and to assist in enrolling appropriate attendees for the four regional meetings.

FUNDS:

The Industry-Labor Council operates under the auspices of Assistance for Disabled Americans, Inc., a non-profit tax-exempt organization formed to support the White House Conference. Dr. Viscardi is Chairman of A.D.A.

FOR MORE INFORMATION:

Industry-Labor Council:

Call: William P. McGahill - (202) 659-5655
Norman C. Hammond - (202) 659-8720
Wallace K. Babington - (202) 653-5109

White House Conference:

Call: Jack Smith - (202) 382-3275

ROUTE TO

BNA

Daily Labor Report

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Today's Summary and Analysis

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PROBLEMS AND GOALS OF HIRING HANDICAPPED PROBED AT INDUSTRY-LABOR MEETING IN CHICAGO

Recruitment, training, and advancement of the handicapped -- and the labor problems associated with this most recently-covered protected class -- were discussed by some 200 representatives of management and labor at a White House-sponsored conference last week in Chicago.

The day-long workshop was the first of four regional meetings to be held by the Industry-Labor Council of the White House Conference on Handicapped Individuals. Recommendations offered by the attendees will be submitted to a national White House Conference, scheduled for Washington, D.C., May 23-27, 1977.

The aim of the conferences is to provide guidelines for national policies regarding hiring and training handicapped individuals. Currently, government contractors with federal contracts exceeding $50,000 must maintain affirmative action programs covering the handicapped. Although the majority of state fair employment practices laws include the handicapped as a protected class, the provisions vary considerably from state to state.

Dr. Henry Viscardi, chairman of the conference, hailed the pilot program, which is the first joint management-labor dialogue on the handicapped on a national level. He urged "top management and top labor" to destroy the concept of "disabled workers" and instead recognize employees as individuals "with varying degrees of ability."

A. Dean Swift, president of Sears, Roebuck, and Company told the conference that rehabilitation of the handicapped was a "sound investment." For every $1,000 invested in rehabilitation, he contended, "the economy receives $9,000 in return -- a figure representing computed federal income tax, the worker's spending power in the community, the discontinuance in welfare payments, and the value received from the worker's labor."

He told the conference that of some 50 million disabled Americans, there are nearly 22 million individuals between the ages of 16 and 64 who have a partial or total work disability. In addition, he cited 1970 census reports showing that although 59 percent of the general population was regularly employed, only 42 percent of the handicapped were.

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Charles Pillard, president of the Electrical Workers (IBEW), called for organized labor to "support, promote and bargain for" the goals of the handicapped employee. Commenting on the largely management-dominated meeting, however, he noted that the first move is always management's. Since management makes the initial hiring decision, without an employer's "full support and cooperation and acceptance" the goals on the handicapped cannot be achieved.

Following introductory remarks, the conference participants met in four workshops to discuss specific problems they faced and to offer recommendations. Following is an overview:

Recruitment: Increasing Job Opportunities

Employers with a history of hiring the handicapped continue to find their loyalty, turnover, and productivity to be better than average, a workshop leader noted. However, without the first step--"getting the handicapped applicant in the front door"--these employees do not have the chance to prove themselves.

Paul Scher, an affirmative action specialist at Sears, and blind himself, cited his company's experience at their Columbus, Ohio, catalog plant. Sears originally recruited two employees from the Ohio School for the Deaf and now has 50 deaf employees at that location--working in shipping and receiving, credit records, computers, and inventory control. Sears also hired a blind computer programmer at its corporate headquarters who will initiate a training program for other blind workers.

Another recruitment concern was the role of the sheltered workshop in training the handicapped. Although some handicapped advocacy groups see these programs as a means by which industry backs out of its responsibility to the disabled (since the workers are paid at sub-union, and often minimum wage levels), a representative for the Illinois Division of Vocational Rehabilitation said that whenever possible, they must be used as a temporary mechanism, designed as a recruitment aid that will eventually bring the trained, handicapped worker into a "real" job.

Benefit Plans and the Handicapped

Participants offered a series of recommendations regarding established benefit plans that would encourage employers to increase handicapped hiring:

- A uniform definition of handicap should be established under state and federal laws.

- Second injury funds under worker's compensation must be broadened and made uniform. By limiting a company's liability on pre-existing conditions, companies will be less wary of hiring severely handicapped applicants.

- National standards on workers compensation laws should be proposed;

- Legislation should be proposed that would "spread the liability" of hiring the handicapped across industry, so that those employers who make the greatest effort and hire the most handicapped workers are not penalized for their actions;

- Ways to offset the "financial handicap of hiring the handicapped"--especially for the small employer--must be established;

- A national study regarding employee benefits programs as they apply to and affect the handicapped should be commissioned.

Accommodations and the Workplace

Changing facilities to accommodate the physically handicapped is not that expensive, according to a speaker from the Rehabilitation Institute of Chicago, who consults with employers. He said company officials frequently have preconceived notions that major changes will have to be made in their buildings, while accessibility often is improved merely be removal of doors, installation of ramps, and other, minor structural changes.

A provision of the tax code gives companies a tax break of $25,000 for making their buildings accessible to the physically handicapped. The Internal Revenue Service will issue regulations on the provision next month.

However, participants noted that the tax incentive offers little help to large corporations with many facilities. They recommend that the law be amended to offer the same deduction for improvements on each physical plant of a corporation.

In other suggestions regarding accommodations, the participants called for:

- Technical assistance to help companies come into compliance;
- Better enforcement of state building codes;
- Sensitizing architects, building contractors, and construction unions to the needs of the physically handicapped;
- Greater use of accessibility signs in public places.

Promoting Affirmative Action

Although there was some call for numerical goals for hiring the handicapped, most of the employers felt goals--in terms of numbers--would turn affirmative action for the handicapped into a "self-defeating" program. Citing the number of affected groups already covered by numerical goals (under the provisions of Executive Order 11246 covering federal government contractors, as well as many EEOC-imposed plans), one participant said that adding the handicapped would weaken the effort, turn the program into a "numbers game," and increase "false handicaps" so that employers could fill their imposed goals.

Instead, participants tended to support changes in employment policies and practices that would promote and encourage hiring of the handicapped. Affirmative action, suggested one employer, "should be a totality of effort"--recruiting, outreach, training, and accommodation--rather than numerical goal setting.

Private employers cited the need for better coordination and consistency in government efforts. They called for a clarified definition of "handicap" and "qualified handicapped individual," a national implementation of the American National Standards Institute (ANSI) standards on building accessibility, and cooperation between regulatory agencies.

A need was also voiced for "consciousness raising" and awareness sessions for supervisors, managers, and personnel representatives. Attitudes and approaches must be changed and the handicapped applicant or employee must be given an opportunity to perform to his full, individual capacity if an affirmative action program is to be a success.

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The Chicago meeting was the first of four regional conferences sponsored by the Industry-Labor Council. The next meetings will be at Stanford Research Institute, Menlo Park, Calif., February 2; Georgia State University, Atlanta, February 23; and Human Resources Center, Albertson, Long Island, N. Y., March 23.

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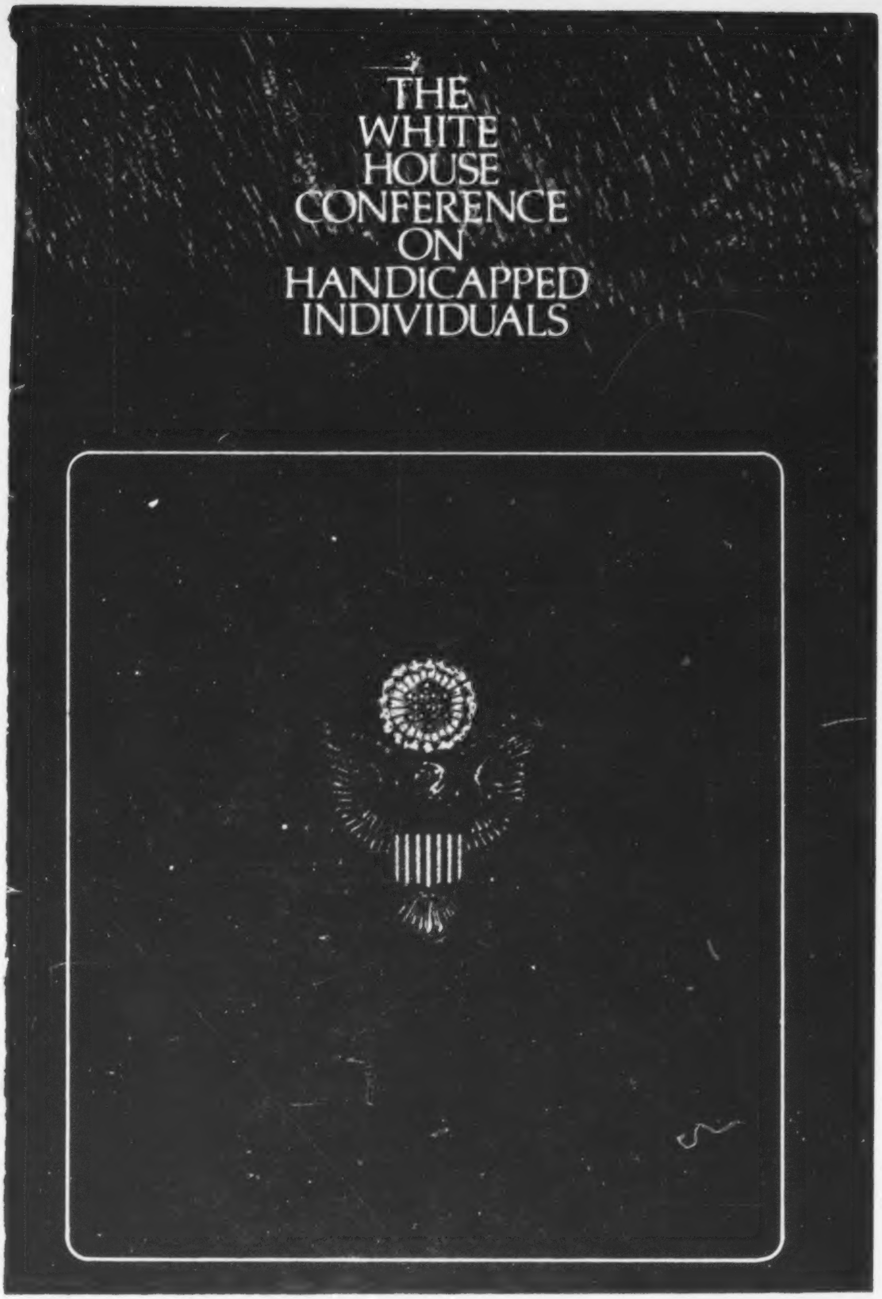

THE
WHITE
HOUSE
CONFERENCE
ON
HANDICAPPED
INDIVIDUALS

PRESIDENTIAL MESSAGE

"It is appropriate that in the Bicentennial Year the Federal Government focus attention on the needs of our handicapped citizens. Employment of the handicapped, and related personal and social problems, must be examined and creative solutions developed."

"Concern for the handicapped is not unique to the Federal Government. State and local officials and private citizens must also turn their attention to the needs of the handicapped. The private sector can perform a creative role by contributing its talents and resources."

"I urge all Americans to support and participate actively in this great human endeavor."

Gerald R. Ford
President
November 22, 1975

FOREWORD

Disability is nothing new to me—I was born with it. I lived with it as a child and young man. Born without limbs, I came to know all the pity, pain, frustration and disillusionment that is the life of the disabled.

To me and millions of disabled Americans like me, freedom is the opportunity to seek the challenges of life and not the stale calm of some subsidized Utopia.

The White House Conference on Handicapped Individuals represents the culmination of my work in the fields of education, rehabilitation and advocacy for physically and mentally handicapped children and adults.

While it has been a very gratifying experience, it is more importantly a prologue for the future. As we move into our third century as a free nation of diverse people, it is vital that handicapped individuals express their needs and potentials to elected officials and fellow citizens.

This is both a right and a responsibility. The White House Conference on Handicapped Individuals is the appropriate forum for this purpose. By working together, I am confident that we will achieve our ultimate goals of dignity, independence and freedom of participation in all of life's activities.

Dr. Henry Viscardi, Jr., Chairman,
National Planning and
Advisory Council

LEGISLATIVE HISTORY

The White House Conference on Handicapped Individuals was authorized by Public Law 93-516, the Vocational Rehabilitation Act of 1973, as amended in 1974. Title III of the Act declared, "It is of critical importance to this Nation that equality of opportunity, equal access to all aspects of society and equal rights guaranteed by the Constitution of the United States be provided to all individuals with handicaps."

The measure was passed and approved by both House and Senate in November, 1974 and signed into Law by President Ford in December, 1974. Title III, sections 300-306, P.L. 93-516, is referred to as the "White House Conference on Handicapped Individuals Act."

MISSION STATEMENT

The mission of the White Conference on Handicapped Individuals is comprised of three goals:

- to provide a national assessment of problems and potentials of individuals with mental or physical handicaps;
- to generate a national awareness of these problems and potentials; and
- to make recommendations to the President and Congress which, if implemented, will enable individuals with handicaps to live their lives independently, with dignity and with full participation in community life to the greatest degree possible.

A CHALLENGE

BY JACK F. SMITH
EXECUTIVE DIRECTOR

Disabled individuals of this nation, through the White House Conference on Handicapped Individuals, have been offered their greatest challenge and opportunity—to play a role in determining their own destiny.

Designed as a systematic process of providing input from grassroots levels through State and Territorial Conferences leading to a White House Conference, all mentally and physically handicapped individuals have been challenged both to assess the problems they face nationwide and fashion solutions that will enable all disabled citizens to live more independently, with greater dignity and with full participation in all areas of community life.

To ensure consumer involvement at the National Conference, 50 percent of the delegates must be handicapped, 25 percent parents or guardians of the disabled and the remaining 25 percent will represent other categories such as consumer and provider organizations, business and labor and professionals.

A spirit of inclusion has been encouraged in State Conferences. State Directors, appointed by Governors, have organized State Conferences with an emphasis toward consumer involvement, but have urged the inclusion of everyone interested in helping to surface and solve the pressing problems that have gone too long unresolved.

Cooperation — not competition — that's the key and it is demonstrated in State Conferences where consumers, providers and professionals work together to make Conferences successful.

While the White House Conference is providing basic guidelines and support for the organization of State and Territorial Conferences, States have great flexibility to organize in ways that meet their needs. Some are conducting a State Conference, while others are conducting regional meetings or forums. Another option is for regional meetings only.

Under the five major concern areas of Health, Social, Special, Education and Economics, there are 25 topics. The White House Conference prepared both Awareness Papers and Workbooks to assist the States in understanding current thinking on the topics and issues that had been identi-

fied as being of national concern. Each State is required to address at least two issues under each of the 25 topics. They can also address more and add their own. Most States are finding that many of the issues identified at State Conferences are those originally identified by the White House Conference.

Individual States are conducting media programs to create awareness of this first White House Conference and its potential for solving problems faced by disabled Americans.

States are identifying the issues and solutions that will form the agenda for the White House Conference May 23-27, 1977, in Washington, D.C.

Voting delegates will be named or elected through the State Conference process. At the National Conference, the delegates will address specific issues, discuss the merits of alternative solutions and vote on the solution they feel best solves the problem. The solutions to all issues will, of course, impact on the States and the private sector as well as the Federal Government.

The White House Conference also has an awesome opportunity never before offered—it is required by law to develop an Implementation Plan; that is, a plan to ensure Conference recommendations are followed up and executed.

The White House Conference is a shining example of how dependency of the handicapped can be changed to maximize both ability and capacity.

Through the systematic process of State Conferences and the National Conference, this White House Conference will meet its challenge to develop recommendations to the President and Congress that will have a lasting impact on the lives of all mentally and physically handicapped Americans.

THE DELEGATE SELECTION PROCESS

The voice of this nation's disabled, parents and professionals will be reflected clearly in the Final Report from the White House Conference on Handicapped Individuals to the President and Congress.

Delegates to the White House Conference, scheduled May 23-27, 1977, in Washington, D. C., will be representative of those individuals who have participated in State Conferences which precede the National Conference.

To ensure the "consumer" aspect of the Conference, 50 percent of the 672 State delegates are to be disabled, 25 percent to be parents or guardians of handicapped individuals, with the remaining 25 percent to include others involved in research, business, labor, service delivery, medical, legal, advocacy and the broad variety of activities surrounding the needs and concerns of disabled persons.

In addition, the White House Conference is taking into consideration such factors as urban, rural, economic, racial, ethnic, gender, age and types of handicapping conditions to achieve a broad range of opinions regarding the issues facing persons attending the National Conference in May.

Each State and Territory will be entitled to select the same number of alternates as they have delegates. Alternates may attend the Conference as observers or as voting delegates if official delegates are unable to attend.

Numbers of delegates have been allotted in relative proportion to a formula used to award grants to every State and Territory. The formula is based on each State's population and per capita income as compared with national population and per capita income.

The 672 State delegates have been allocated as follows: 23 States—8 delegates; 10 States—12 delegates; and 23 States—16 delegates.

In addition, invited as observers to the White House Conference will be representatives of national consumer and provider organizations, members of Congress or their appointees, representatives of industry and labor and professionals working on behalf of disabled individuals.

Certainly, this collective representation, in assembling for the purpose of exploring new horizons for America's handicapped citizens, faces a tremendous challenge. However, given an atmosphere of consideration, respect and sharing, the Conference will produce new directions and opportunities for all physically and mentally handicapped children and adults.

NATIONAL CONFERENCE SITE

Barrier-free accessibility was an important factor in the White House Conference on Handicapped Individuals' selection of the landmark Sheraton-Park Hotel in Washington, D. C. to be the site of this profoundly important National Conference. This decision represents a major step forward in creating a suitable Conference environment for disabled persons.

Scheduled for May 23-27, 1977, this will be the largest meeting of persons with disabilities ever assembled in the United States. The total attendance will be 2,500 persons of which at least 50 percent will be handicapped.

The Sheraton-Park consists of two adjoining buildings offering a variety of guest, dining and meeting accommodations. The 400 most accessible rooms are reserved for persons with severe mobility disabilities. Others with moderate or different types of impairment will be assigned to rooms with limited accessibility features. Able-bodied attendees will occupy rooms having no special modifications.

The overall plan will ensure that all delegates, alternates and observers will be housed in suitable accommodations while in Washington, through renovation of bathrooms in guest rooms and throughout the Hotel, making them totally accessible for individuals using wheelchairs. There will be many other modifications as needed.

Specifically, the hotel plan includes the permanent ramping of entranceways, the swimming pool deck and service entries from the various parking areas. Special parking areas for those driving cars and vans equipped with hand controls will be designated. Telephone booths will be lowered and amplified equipment installed. New, enlarged dials will be added to the phones for persons with limited vision.

Several service elevators will be converted to passenger status and will be altered to improve mobility and enhance appearance. Restaurants and lounges will have new floor plans to accommodate persons using wheelchairs and crutches. Throughout the Sheraton-Park there will be

raised letter/numeral signs to direct blind delegates.

Renovation commenced November 1, 1976 and will be partially completed by December in order to accommodate the needs of a smaller group of handicapped individuals conducting their meeting at that time. Work will be fully completed by May 1977 for the White House Conference.

In addition, to eliminate the need to travel long distances to dine and to increase the amount of time devoted to Conference issues and recommendations, buffets will be located at various points throughout the meeting room complex.

Other basic needs have received consideration and review, such as braille menus for meal functions and daily programs, captioned films, interpreters for deaf delegates, a message center with telephone-typewriter capabilities, an accessible and streamlined registration system and special dietary menu selection.

Services will be provided for acquiring special lifts or chairs and repair of wheelchairs, crutches, hearing aids and other assistive devices.

These accommodations represent a breakthrough for disabled persons desiring to visit the Nation's Capital or attend other conferences here. At long last Washington, D. C. will offer reasonable hotel facilities for large numbers of handicapped persons to match the accessible Metro subway system and recently renovated memorials and museums along the curbcut connected mall.

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INDUSTRY-LABOR COUNCIL

of

The White House Conference on Handicapped Individuals

REGIONAL MEETINGS

ABOUT THE WHITE HOUSE CONFERENCE . . .

In late May 1977, The White House Conference on Handicapped Individuals will convene with the general purpose of assessing and calling public attention to the quality of life experienced by more than 30 million American citizens who are physically and mentally handicapped. "It is of critical importance to this Nation," declared the law which established this Conference, "that equality of opportunity, equal access to all aspects of society, and equal rights guaranteed by the Constitution of the United States be provided to all individuals with handicaps."

In preparation for the Conference, rehabilitation officials and other concerned individuals in each state are holding State Conferences to assess the problems of the handicapped and to draw up recommendations. Dr. Henry Viscardi, Jr. is Chairman of the White House Conference on Handicapped Individuals.

THE INDUSTRY-LABOR COUNCIL

To assure that the views and recommendations of labor and management are adequately represented at the White House Conference, the Industry-Labor Council was established. The Industry-Labor Council provides a forum for the expression of concerns relating to the recruitment, training, advancement of handicapped employees.

To gather the vital information and advice from a geographical cross-section of labor/industry leaders, the Council has planned four one-day meetings around the country as follows:

November 18, 1976—Chicago, Illinois (University of Illinois, Circle Campus)

February 2, 1977—Menlo Park, California (Stanford Research Center)

February 23, 1977—Atlanta, Georgia (Georgia State University)

March 16, 1977—New York, New York (Human Resources Center, Albertson, Long Island)

Meeting Issues and Format

Issue 1—Recruitment of qualified handicapped persons

- Where recruit qualified handicapped persons?
- What information on job vacancies to be given to recruitment sources?
- What is responsibility of labor/industry to agencies providing job preparation services to handicapped persons?
- Adequacy and appropriateness of tests and medical examinations, and use of results, in increasing job opportunities for handicapped persons.

Issue 2—Accommodations

- Building modifications
- Transportation arrangements
- Worksite modification
- Job restructuring (task analysis)
- What is necessary to gain acceptance of handicapped persons by others to assure successful entrance and integration?

Issue 3—Employee Benefits

- Insurance costs (Life, health)
- Workers Compensation costs
- Labor/industry responsibility for assuring equal benefits to handicapped employees
- Effects of government regulations

Issue 4—Affirmative Action for qualified handicapped persons

- Relationship with other affirmative action (Equal Employment Opportunities) programs
- Elements of a workable plan to assure equal opportunity for handicapped persons. (Physically and mentally handicapped persons are represented among all minority groups.)

Two experts (representing labor and industry) on each subject will meet with each workshop group early in each workshop period. The balance of the period will be a free exchange of ideas, opinions and experiences. A summary of views from the workshop groups will be reported.

The White House Conference Report

An in-depth report reflecting the industry/labor consensus from the deliberations will be presented to the White House Conference on Handicapped Individuals. Ten delegates—five from labor and five from industry—will present the report and represent the Council at the White House Conference.

Following the Conference, the Council's report will be presented to Congress and the President, and will be available to participants and others.

WHY PARTICIPATE?

Disabled Americans, as with other minorities, deserve equal and fair treatment as individuals and employees. However, for many reasons, this often has not been the case, and the government has begun instituting laws and regulations to remedy the situation.

By participating in the Council's meetings, key representatives from industry and labor have a rare opportunity to identify problems and suggest solutions that are truly workable. There is no question but The White House Conference on Handicapped Individuals will result in new legislation and guidelines. It is imperative that labor and management play important roles in the development of any new efforts.

Equal opportunity for handicapped Americans must be achieved in a manner compatible with America's industry-labor free enterprise system if all elements of society are to live and work together productively.

REGISTRATION

Anyone wishing to participate in Industry-Labor Council's regional meetings should send their name, union/company name and address along with an indication of which meeting they will be attending to: W. K. Babington; Industry-Labor Council; The White House Conference on Handicapped Individuals; 1111 20th Street, N.W., Room 636; Washington, D. C. 20036. Each registrant should include a check for $25 made out to "Assistance for Disabled Americans, Inc.", to cover registration and luncheon expenses. (Assistance for Disabled Americans is the organization established to conduct the financial operations of the Industry-Labor Council.)

The White House Conference
on Handicapped Individuals
HENRY VISCARDI, JR., General Chairman

INDUSTRY-LABOR COUNCIL

GEORGE MEANY
President, AFL-CIO

JOHN R. OPEL
President, IBM Corp.

Co-Chairmen

A. DEAN SWIFT
President
Sears, Roebuck & Co.

CHARLES H. PILLARD
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Co-Vice-Chairmen

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The Industry-Labor Council
is affiliated with
Assistance for Disabled Americans, Inc.

Senator RANDOLPH. Dr. Bliss, will you identify yourself? I know that Dr. Stilwell will be a part of this testimony as you work jointly.

It is good to have California and West Virginia hooked up together. We are delighted to have you talk today about some important developments, so would you proceed.

STATEMENT OF JAMES C. BLISS, PH. D., PRESIDENT, TELESENSORY SYSTEMS, PALO ALTO, CALIF., ACCOMPANIED BY DR. ROBERT STILWELL, MORGANTOWN, W. VA.

Dr. BLISS. I appreciate the opportunity to testify before this subcommittee.

My name is James Bliss, and I would like to speak about our efforts in providing useful, cost-effective, high technology aids for the blind, an endeavor that I have been personally involved in for more than 18 years, as a graduate student at MIT, as a faculty member at Stanford University and as president of TSI.

First, I would like to introduce Prof. Robert Stilwell, who has been a key adviser to us over the years.

Dr. STILWELL. Thank you very much.

I'm honored to be here, and I should say a word, I think, as to why I am here. Not because any autobiographical material of mine is of any importance, but because I need to explain why I happen to be the one.

I have been blind since I was 2 years old. At the age of 16 I decided to become a college professor. Therefore, all the way through my three university degrees and my subsequent teaching in college, which span about 40 years, I have had as much reason to depend on reading and to know the value of reading as anyone alive.

I started by being read to, of course. This was the only means accessible to me.

Then I learned two dot code systems, New York Point and Braille.

And, then eventually I got access to splendid material that is supplied to us by the Library of Congress, talking books, tapes, and records.

But the most revolutionary thing that has ever occurred to me in my career is the Optacon.

I began using it in 1972 and I have used it practically every day since. It has made a complete revolution in my work.

It influenced me to the point where I accepted early retirement in order to devote more time to it and to the teaching of the Optacon to other people.

I have established an Optacon association. I have taught, together with my wife, 15 people to use the Optacon.

I use it in all my work. I think for these reasons I am qualified to say something about it and something about the questions concerning the ability of blind people to read.

Thank you.

Dr. BLISS. Thank you, Bob.

Between 1968 and 1970, the Optacon Development Group undertook a large scale study, sponsored by the National Eye Institute, which considered and tested many alternative approaches toward meeting the unfilled reading needs of the blind. The results of this study led to two conclusions:

First, the Optacon should be widely disseminated as a portable reading aid to provide for many reading needs of the blind as a stand-alone device.

With respect to this conclusion, I can report to you now that the Optacon has gained wide acceptance throughout the United States and the world. There are now over 3,000 Optacons in field use and this number is increasing at a rate of over 1,000 per year.

Under support from the Office of Education, Bureau of Education for the Handicapped, a major Optacon dissemination program in schools across the United States is now underway.

The second conclusion was:

It is technically feasible to develop an accessory to the Optacon which would provide spoken word output. We concluded in 1970 that the Optacon should be designed with an I/O plug at the back of the Optacon to make possible the addition of this spoken word output accessory at a later date when the technology permits.

In 1970, the costs of the equipment to perform this spoken word output function were prohibitive. I can report to you now that in 1977 the costs are still too high, but technological breakthroughs in the field of large scale integration of electronic-microcircuits have substantially reduced cost and promise to continue to do so.

In 1975, following surveys of the needs of blind people, it became clear to us that spoken word output would be the most effective display for a calculator for the blind.

Today, just 2 years later, I can report to you that we have developed a talking calculator for the blind called the Speech Plus, and that several thousand blind people have already integrated it into their careers, their studies and their daily living. It may be of particular interest to this subcommittee that an ever-increasing number of blind people working in State business enterprises programs established by the historic Randolph-Sheppard Act are using Speech Plus calculators to take a more active role in the management of their businesses. Also, blind students at all grade levels are beginning to benefit from the Speech Plus which makes complex computations more realistic and meaningful.

Let me demonstrate:

[A demonstration was conducted off the record.]

Dr. Bliss. This successful involvement in the field of speech output led us to examine again the possibility of a speech output reading accessory to the Optacon. Taking the approach that will result in a system priced within a personally affordable range requires substantial investment in the development of custom microcomponents, much like the custom components developed for the Speech Plus calculator, rather than an off-the-shelf component system that is prohibitively expensive and too cumbersome to be readily portable.

Professor Stilwell and I would now like to illustrate the concept of the type of spoken word output reading accessory that TSI is currently developing.

Professor Stilwell will read a sentence with his Optacon, using the tactile images, which will be illustrated to you visually here on this display.

[A demonstration was conducted off the record.]

Dr. Bliss. Next, imagine if you will, a box plugged into this connector about the size of an office typewriter.

Professor Stilwell will next scan more rapidly than before, more rapidly than he can recognize the tactile images. Recognition of these images would be performed electronically and synthetic speech would be produced and I will play for you a sample of our synthetic speech in demonstrating how a blind person would actually use the real system.

[A demonstration was conducted off the record.]

Dr. Bliss. This speech was produced completely synthetically, as you can see, and we have been extremely concerned with the speech quality.

Whereas it is possible to produce synthetic speech with readily available components, instead our approach incorporates a highly sophisticated linguistic analysis and produces highly intelligible speech.

It is our belief that this higher intelligibility will be necessary for a practical system usable by a wide range of blind people.

Major portions of this system are working in our laboratories in California.

In order to accomplish this task of developing a flexible, portable, and cost effective full-word accessory to the Optacon, TSI is cooperating with the Massachusetts Institute of Technology, the National Science Foundation, and the Seeing Eye, Inc.

By the end of the year we will have an experimental setup of our reading machine for initial evaluation by blind people under a grant from the National Science Foundation.

I would now like to ask Professor Stilwell to comment on the significance of this approach.

Thank you.

Dr. Stilwell. I should like to say, first of all, that the most important thing in all of this, the key word, if we may use that expression, in all of this, is the word "access."

The Optacon has become as much a part of my life as bifocals would be to a person who needed them. I keep it with me always.

I take it with me when I travel. I keep it on my desk when I work at home.

The Optacon gives me access to my own mail for the first time in my life. It gives me access to dictionaries of all sorts and in many languages. It gives me access to any reference book that I wish to use, access to all kinds of printed material.

If a new periodical appears in a journal which is in my field, I have access to it by means of the Optacon.

Now, the difficulty with the Optacon as we all admit, is that it is not a rapid means of reading. Even after long practice, one does not read as rapidly with the Optacon as good readers can read with Braille, or certainly not as rapidly as a sighted person would read.

Anything that can be done, therefore, to increase the speed with which the Optacon works will be an enormous advantage.

I want to emphasize, however, that going back to my word "access" that whatever is developed has to be accessible to the individual blind person, accessible to the individual.

This is the important thing.

If I could not afford to own an Optacon, if I could not have it with me, if I could not carry it with me, if I could not use it when I am pleased to use, I needed to use it, it would be far less valuable to me.

It seems to me we should keep in mind in all dealings with developments of this kind that whatever is done, must be toward making reading accessible to the individual.

This device that Dr. Bliss has described would add as you noticed awhile ago, when I was scanning, it would perhaps double or more than double the speed at which I could read.

This would be welcome. I would not want anything to take away the fact that with the Optacon camera in my hand I can feel precisely what is on the page in print.

You might not believe it, but for the first time after more than 50 years of working with the typewriter, with letters, with learning, with reading, with many languages, I did not know, until I got the Optacon in my hands, that an apostrophe is above the line.

Just a small thing like that.

It is not that, it is the fact that the Optacon presents to you anything that is on the printed page.

You see the symbol.

As I used the word "see" and you understand why—one does not see it, one feels it.

But he feels precisely the same thing, only that it is enlarged.

What I am concerned with, why I am here, is that I want to emphasize that this is an enormous breakthrough.

The Optacon, of course, is not for everyone. It is for some people, just like everything. There are many people who do not read braille, many blind people. Many blind people who can read braille, do not read it very much.

These are some of the individual differences that make America great. It must be that way.

For some people, people like me and other people, people who have other reasons, the Optacon is an enormous advantage.

In my thinking it is the most important single breakthrough that has been made in the education and the restoring to life of blind people since the invention of braille.

Now, if we can technically, by the use of modern technology, if we can increase the speed by adding speech to the Optacon, this will again be an important step forward, but it would not in any way deteriorate or detract from the enormous value that the Optacon is to those of us who use it.

I have hundreds of letters in my files that I have gotten from Optacon users, not only in practically every State in this country, but from a dozen or more foreign countries, testifying to the difference that the Optacon has made in making print accessible.

I cannot here take the time to go into the difficulties that surround accumulations of braille. I have in my home two full rooms of books in braille that I have acquired over the years, printed books, and copied books—most of them have been copied by myself and my dear wife—and those books were invaluable to me in all my work all through the years.

But, now, they are unnecessary because I have the Optacon.

Thank you, sir.

Dr. BLISS. We appreciate the opportunity to present the committee with our approach to the problem of print-to-speech reading for the blind. I would like to assure you that the development of a print-to-speech reading system holds top priority at Telesensory systems. In an area of research and development that is of such great concern to so many people, it is of paramount importance to consider all aspects of those efforts aimed at solving the reading problems of the blind.

In conclusion, I would like to emphasize that our primary goal is to make available the tools, training, and support necessary to enable blind people to develop their fullest potential.

At the same time, we are humble enough to realize that technology is only one necessary ingredient leading to better educational, vocational, and daily living opportunities. By working closely with a cross section of many blind people, we believe that much can be achieved in the near future to ameliorate the handicap resulting from blindness.

Thank you.

Senator RANDOLPH. Thank you very much, Dr. Bliss.

I wish you and Dr. Stilwell would remain at the witness table so that Senator Stafford and I may comment, and perhaps ask some questions.

At this point, I would like Alma to stand.

You have been such a help to Dr. Stilwell through the years, working on the various subject matters that he discussed.

I want the record to show the sharing of responsibility by so many people within families, within schools, within communities. That, to me, is something very worthwhile and I try to recognize it.

I know so many individuals who stand side by side with the handicapped because they know the handicapped have so much to offer, and they want to be a part of that process. Do you feel that, Dr. Bliss?

Dr. BLISS. Yes, sir.

Senator RANDOLPH. Dr. Stilwell, I imagine you do.

Dr. STILWELL. You may well imagine, sir.

Yes.

Senator RANDOLPH. Now, we would like to ask you what recommendations you have for the dissemination of this Optacon and other, let us say, innovative, creative technology? How can we let more people know about these developments? Is it just through ordinary channels of advertising? The dissemination is very important to me, to know what is being done or could be, to a greater degree.

Dr. BLISS. I would like to comment on that.

There is underway now, as I mentioned, a dissemination program across the United States being conducted by the Bureau of Education of the Handicapped which is, first of all, training school teachers in 20 universities, how to teach reading with the Optacon to blind children.

Senator RANDOLPH. Could you provide a list of these universities to be placed in the record?

Mr. BLISS. I can do that.

Those universities are teaching teachers and those teachers are going out to their schools, and this program is providing Optacons to those schools for our blind children to use.

[The list referred to follows:]

OPTACON DISSEMINATION PROGRAM

Universities preparing teachers for instructing Optacon reading to blind students as a part of the Optacon dissemination program funded by the U.S. Office of Education, Bureau of Education for the Handicapped are:

Boston College, Chestnut Hill, Mass.
University of Virginia, Charlottesville, Va.
University of Northern Colorado, Greeley, Colo.
Dominican College of Blauvelt, Blauvelt, N.Y.
University of Puerto Rico, San Juan, Puerto Rico.
Northern Illinois University, De Kalb, Ill.
Columbia University, New York, N.Y.
Florida State University, Tallahassee, Fla.
California State University—Los Angeles, Los Angeles, Calif.
University of Michigan, Ann Arbor, Mich.
University of Texas, Austin, Tex.
Eastern Michigan University, Ypsilanti, Mich.
Wayne State University, Detroit, Mich.
University of Louisville, Louisville, Ky.
San Francisco State University, San Francisco, Calif.
Hunter College, New York, N.Y.
Illinois State University, Normal, Ill.
Michigan State University, East Lansing, Mich.
Portland State University, Portland, Oreg.
George Peabody College, Nashville, Tenn.
Temple University, Philadelphia, Pa.

Senator RANDOLPH. Dr. Bliss, I understand this is highly important and I am thinking of the public generally.

Do they have any opportunity to know what is taking place?

Dr. BLISS. I think they need more opportunity to know about this. I have a meeting this afternoon at the Bureau of Education of the Handicapped to discuss this very issue as to how we can let the public know about this.

This will provide, I believe, for the training of many blind children.

This program will be augmented, hopefully, by school districts and States which will provide for the training of Optacon usage in schools.

Senator RANDOLPH. What is the cost of this equipment?

Dr. BLISS. The cost of the equipment is on the order of $2,000 for each equipment, and the program for the first year is a $1 million program that is being sponsored by the Bureau of Education of the Handicapped.

Now, this, I think, will provide very well a beginning for the teaching of Optacon reading by blind children within schools, but once those children begin to graduate from schools, I believe we will have a problem.

The problem will be that they have learned to use a skill and learned to use a technological aid, but at this moment the provision of the assistance necessary for them to continue this skill that they have developed, to continue having this access that Professor Stilwell has spoken of, is not assured.

It will work through the normal channels in some cases, in that in some States the department of vocational rehabilitation will and is providing Optacons to blind people if it makes a difference in employment.

In other words, if it can clearly be shown that employment will result by having an Optacon, then it will be provided by some State departments of vocational rehabilitation but this policy is by no means common among all 50 States. Certain States have adopted this policy.

In addition to that, there are situations in which blind people could benefit from Optacons but the case for employment cannot be made nearly so clearly.

In these situations there is a further problem.

One simple example is that if a blind student continues his education by going to college, there may be a difficulty in him getting a Optacon in those years in which he does not have any income, and before he is ready for employment.

I think we are making progress in this area, but much more needs to be done to help this problem of providing access to reading and to equipment like an Optacon in these formative years.

In terms of other kinds of equipment, we think that things like the Speech Plus calculator that I demonstrated to you can be significant in the teaching of mathematics to blind children.

We note that there are papers by many educators which have shown that blind children are on the average behind their grade level by 2 years in mathematics, behind where they should be.

This is because the handicap of blindness makes it especially difficult to develop the concepts of mathematics and the calculation skills.

We think we have the technology that can correct this problem and the problem is now one of disseminating that technology.

Those are a couple of ideas.

Senator RANDOLPH. If you will give Dr. Stilwell the mike, perhaps he wants to make a supplemental statement to what was said.

Dr. STILWELL. The only thing I would add, Senator, would be that I feel, too, the importance of having this information about reading disseminated among the educated population.

I have, therefore, undertaken a book based on my own reading experiences. It is not biographical, that is, I am trying to keep myself out of it, but it is based on the struggle that I have had personally with finding enough reading to become a professor and maintain my position in an honorable and reasonable way.

It has not been easy.

I hope that by doing this, I may be able to shed some light and by keeping the book nonprofessional—this is not intended as a guide for professional people who are teaching or anything of that sort, but simply to inform the enlightened reader what it is like.

Most people think, for example, that if you have an Optacon, it converts into braille. Nothing is further from the truth.

Of course, we are happy it does not because we want the printed word.

The Optacon gives it to you.

By explaining things of this sort and explaining the reason why braille is not more accessible than it is, because of the bulk of it, because of the cost of it, because a professional person in a position like myself, for example, could not get more than 1 or 2 percent of material he needs in braille, it is impossible—all of these things need to be explained in such a way and made readable so that the ordinary enlightened reader will be able to understand it.

I think in this way we can help the populace in general and help ourselves.

If people understand what the problems are, they are in a much better position to help solve them.

Senator Randolph. Thank you, Dr. Stilwell.

Just for the record, again, Doctor, what are you teaching at West Virginia University?

Dr. Stilwell. I was teaching mostly linguistics and German, sir. I retired in 1973.

Senator Randolph. 1973?

Dr. Stilwell. I still maintain an office in the university, and I serve on a committee now and then, but I am not actually teaching anymore.

Senator Randolph. How many years were you on the faculty there, sir?

Dr. Stilwell. I came in 1947. I became chairman of the department in 1962.

Senator Randolph. Very remarkable career.

How many languages do you know?

Dr. Stilwell. Sir, I can only speak two other languages, I would say creditably. I can speak Spanish and German. I can read a number of languages, but that is different. It is easier to learn to read a langauge that it is to speak it.

Senator Randolph. That is correct.

Dr. Bliss, the Optacon is manufactured by Telesensory Systems?

Dr. Bliss. Yes.

It was established in 1970 by four faculty members from Stanford University and we had all been involved in the prior 5 or 6 years in the development of Optacon.

At that point, we saw several Stanford students using it, realizing it was a practical device, and we were highly motivated to make it available.

The only way at that time we could see to make it available was to set up Telesensory Systems and undertake the manufacture of it ourselves.

Telesensory Systems has been in existence and operating for the past 5½ years, and we are now moving into many new areas, and I feel we have a very exciting field.

The company has about 120 employees and it has been a very dynamic experience.

Senator Randolph. How many of the 120 are handicapped individuals?

Dr. Bliss. I think about three or four are handicapped.

We have two blind employees on our staff at the present time, including a woman, and an employee with multiple sclerosis.

Senator Randolph. With a good or bad record?

Dr. Biss. We think they are our key employee, and they are at a number of levels in the company.

One of our blind employees is the vice president of the company. Our employee with multiple sclerosis is head of our communications department.

We have a blind receptionist for the company—typist-receptionist.

We have two other blind part-time employees who are in our quality assurance department.

Every Optacon we manufacture, we feel, has to be used by a blind person to read, to assure that it has all subjective qualities that it should have.

Senator RANDOLPH. Senator Stafford.

Senator STAFFORD. I have no questions.

I am happy I was able to get here for most of the presentation.

I have been very impressed by it.

Senator RANDOLPH. Thank you.

Thank you, Dr. Stilwell and Dr. Bliss.

[The prepared statements of Dr. Bliss and Dr. Stilwell along with material referred to follows:]

DEVELOPMENT BY TELESENSORY SYSTEMS, INC., OF A PRINT-TO-SPEECH ACCESSORY FOR THE OPTACON, A DIRECT TRANSLATION READING AID FOR THE BLIND

Mr. Chairman, I appreciate the opportunity to testify before the Senate Subcommittee on the Handicapped. My name is Dr. James Bliss and I am the President of Telesensory Systems, Inc., of Palo Alto, California. I would like to speak about the efforts of Telesensory Systems, Inc., in providing useful, cost effective, high technology aids for the blind, an endeavor that I have been personally involved in for more than eighteen years.

Telesensory Systems, Inc. (TSI) is a small business (less than 125 employees) which was formed in 1970 to make high technology aids available to the handicapped. Over the past six years, TSI has manufactured and marketed the Optacon, a hand-scanned, direct translation reading machine for the blind, the SPEECH+ talking calculator, as well as other high technology aids for the handicapped.

The Optacon has gained wide acceptance throughout the United States and the world. Research and evaluation covering design engineering, training instruction, and program development have been conducted by major education, rehabilitlation, and research institutions in the United States, Great Britain, Germany, Sweden, Italy, and Japan. In the United States, the following organizations have been involved in developing and evaluating the Optacon:

1. The United States Office of Education
2. Stanford University Electronics Laboratories
3. Stanford Research Institute
4. The Social and Rehabilitation Service
5. The Seeing Eye, Inc.
6. American Foundation for the Blind
7. American Institutes for Research
8. Franklin Institute Research Laboratories in Philadelphia
9. The National Science Foundation

and numerous others. For example, The American Foundation for the Blind study recommended that "All rehabilitation facilities and school systems should routinely include Optacon training in their programs for blind adults and children, and communities should set up central coordinating organizations to underwrite the costs and oversee the distribution of the device in their communities".

The Optacon has been very successful in providing flexible, independent access to all types of printed matter to the blind. Despite this success, reading rates are inconveniently slow relative to sighted readers for many important situations because the blind user must perceive and interpret a tactually presented image of each letterspace. Significantly higher reading rates, as well as enhanced ease of learning and a larger potential user population, would be obtained if the reading machine could provide the user with full-word spoken speech. For many years we have had the objective to provide a flexible, portable, and cost effective full-word spoken output reading system which would be an extension of the Optacon.

The concept of a speech output reading machine for the blind has been seriously discussed for over 25 years, and a number of research efforts have been made. As early as 1967, the Optacon engineering group was concerned with the feasibility of an accessory unit that would plug into the Optacon and speak words as the user scanned them with the Optacon camera. This was prompted by the understanding that such an accessory would both increase the reading speed possible with the Optacon and allow use by blind people having impaired tactile skills.

A large-scale feasibility study sponsored by the National Eye Institute was conducted at Stanford Research Institute from 1968 to 1970 which considered and tested many alternative approaches toward meeting the unfilled reading needs of the blind. The results of this study led to the conclusions that:

- The Optacon should be widely disseminated as a portable reading aid to provide for many reading needs of the blind as a stand-alone device (over 3000 Optacons are in field use as of February 1977).
- It is technically feasible to develop an accessory to the Optacon which would provide spoken word output. This accessory would be simply plugged into the Optacon Input/Output connector at the back of the Optacon and would perform the optical character recognition (OCR), orthographic-to-phonemic conversion, and speech synthesis functions.

In 1970 the costs of the hardware to perform this function were prohibitive; in 1977 the costs are still too high, but technological breakthroughs in the field of Large Scale Integration (LSI) of electronic microcircuits have substantially reduced costs and promise to continue to do so. Also, in 1970, techniques for automatic synthesis of speech from unrestricted text were not nearly as well developed as they are today.

TSI's interest in speech synthesis was greatly increased while searching for a solution to the problem of developing an electronic calculator for blind people. This activity has resulted in an unprecedented display of the effective application of state-of-the-art speech technology to the expressed needs of blind people. In January 1975, following TSI surveys of the needs of blind people and our display evaluation studies involving potential blind users, it became clear that spoken word output would be the most effective display for a calculator. Thus began ten months of concentrated engineering research and development, culminating in October 1975, when the first group of prototype SPEECH+ talking calculators was produced and tested. Four months later, in February of last year, the first production run was completed. Total time span from idea to delivery of the final product was just 13 months.

Today, just one year after its introduction, the SPEECH+ calculator represents infinitely more than a display of effective application of technology and engineering expertise. Several thousand blind people have already integrated the talking calculator into their careers, their studies, and their daily living. It may be of particular interest to the committee that an ever increasing number of blind people working in State Business Enterprises Programs established by the historic Randolph-Sheppard Act are using SPEECH+ calculators to take a more active role in the management of their businesses. Blind students at all grade levels are benefiting from this device which makes complex computations more realistic and meaningful.

TSI's successful involvement in the field of speech output led us to reexamine the state-of-the-art that is and will be available for application in a speech output reading system. Taking the approach that will result in a system priced within a personally affordable range requires a substantial investment in the development of custom micro-components, much like the custom micro-components developed for the SPEECH+ talking calculator, rather than an off-the-shelf component system that is prohibitively expensive and too cumbersome to be readily portable.

Dr. Stilwell and I would now like to illustrate the concept of the type of spoken word output system TSI is currently developing.

- -

Basic to our concept of a speech output reading machine is the availability of a hand-scanned camera as the input medium, and direct translation output in addition to the spoken speech. As the desired output is simply the reading aloud of the source material, it may be asked: "Why burden the human user with moving the scanning probe?" "Why not use an automatic mechanical scanner as in an Optical Character Recognition (OCR) page reader?" Although such a scanner may be perfectly appropriate in some situations (and is compatible with the proposed system), there are a number of reasons why it is essential that manual scanning be available as an option.

First, mechanical scanners are expensive and unsuited to reliable operation on a wide variety of materials. No totally successful document handler for bound materials (books, magazines) has yet been built, despite a long series of efforts.

Second, current OCR systems demand rather rigid format conventions. Arduous system design and programming would be required to handle the variations that naturally occur in formats, type styles, the presence of non-text, and so on. With a direct translation machine, the user has page image information as a back-up (to tell if the page is upside down, to troubleshoot difficulties with format, etc.), and for close interaction with the text. Beyond this, a crucial need in human reading is the ability to browse -- to re-read, skip, back up, change pace, go back a few pages if desired, and so on -- all at will and without conscious effort.

Finally, there are many situations in which a spoken word output system will not work at all, or will not work as well as a stand-alone Optacon. Some examples are:

- Foreign language
- Some type styles and unusual symbols
- Complex formats, such as school workbooks, newspapers, tables, boxes, bottles, caps, tapes, records, etc.

- Mathematical equations
- Computer programs
- Newspaper and research paper reading requiring the reader to reference continuation of articles, bibliographies, or lists of footnotes
- Non-alphabetic material such as graphs, maps, line drawings, forms
- Applications requiring portable battery operation such as bulletin boards, shopping, signs, etc.
- Accessory lens module applications such as reading calculator displays, CRT displays, and typewritten copy which is still in the typewriter.

The advantages of spoken word output for a reading machine for the blind are that speech can be understood at 200 word per minute rates (compared to braille reading rates averaging 100 words per minute and direct translation reading machine rates averaging under 50 words per minute), and that speech can be understood by almost everyone (compared to braille which is effectively used by only about 10% of the blind).

A survey conducted by TSI among Optacon users indicated nearly unanimous support and enthusiasm for the idea of an Optacon-based, speech output reading machine, and over half the respondents indicated that hand-scanning was essential For all of these reasons, we strongly feel that the optimum solution to the unfilled reading needs of blind people is an OCR/speech output reading machine having direct translation capabilities and having the option of hand scanning.

Reading is an active rather than a passive process. The reader must be able to have continual feedback about page format, placement of columnar text and pictures, location of headings, titles, paragraphs, footnotes, etc. The most efficient way these things can be accomplished is through direct contact hand scanning of the page of print.

Additionally, with the modular concept TSI is developing, it would be a simple matter to supply the reader with the capability of automatic scanning. The Optacon camera could be simply attached to a separate automatic scanning device to provide this capability when desired.

In order to accomplish the task of developing a flexible, highly portable and cost effective full-word spoken output reading machine for the blind, TSI is cooperating with the Massachusetts Institute of Technology, the National Science Foundation, and The Seeing Eye, Inc. By the end of this year, we will have an experimental set-up of our reading machine for initial evaluation by blind people under a grant from the National Science Foundation.

Aspects of the reading machine evaluation will include sensitivity to tracking errors, allowable tracking speed, operating convenience and flexibility as well as experiments concerning the comprehension of synthesized speech. These aspects will be studied under situations involving blind people of varying ages with different needs, vocations, and interests.

Telesensory Systems, Inc., is extremely concerned with the speech quality of the reading machine. Whereas it is possible today to produce synthetic speech with readily available systems (this is done by the Kurzweil Reading Machine), the user frustration involved in listening to this synthesized speech for long periods of time has not been determined.

The method of speech synthesis that TSI is using (developed by Professor Jonathan Allen and his group of the Massachusetts Institute of Technology) incorporates a highly sophisticated linguistic analysis and produces extremely intelligible speech with more human characteristics. It is our belief that this higher intelligibility will be necessary for a practical system useable by a wide range of blind people.

We appreciate the opportunity to present the committee with our approach to the problem of print-to-speech reading for the blind. I would like to assure you that the development of a print-to-speech reading system holds top priority at Telesensory Systems. In an area of research and development that is of such great concern to so many people, it is of paramount importance to consider all aspects of those efforts aimed at solving the reading problems of the blind.

In conclusion, I would like to emphasize that our primary goal is to make available the tools, training, and support necessary to enable blind people to develop their fullest potential. At the same time, we are humble enough to realize that technology is only one necessary ingredient leading to better educational, vocational, and daily living opportunities. By working closely with a cross section of many blind people, we believe that much can be achieved in the near future to ameliorate the handicap resulting from blindness.

Testimony presented by Dr. James C. Bliss to the Senate Subcommittee on the Handicapped, February 25, 1977.

PRINT READING FOR THE BLIND
TESTIMONY PRESENTED BY DR. ROBERT STILWELL, MORGANTOWN, W. VIRGINIA
TO THE SENATE SUBCOMMITTEE ON THE HANDICAPPED
FEBRUARY 25, 1977

Mr. Chairman, I am most honored to be able to present testimony this morning on the subject of print reading for the blind. My name is Robert Stilwell and I was Professor of German and Chairman of the Department of Foreign Languages at the University of West Virginia. I am now retired and living in Morgantown, West Virginia.

Recent developments in technology have made possible the practical conversion of ordinary print into tactile or audible expression. Several devices have been developed, or are now under development, to make all printed or typed material available to a blind person without the necessity of having the material read aloud or copied into braille. The three directions the development is taking lead to three quite different devices: The tactile direction has led to the development and marketing of the Optacon. The audio approach has led to the Stereotoner on the one hand and to attempts to produce a machine using computer language on the other. I should like here to draw certain comparisons between the Optacon and the speech-reading machine now under development. I do not wish to comment on the Stereotoner further than to say that it is dependent on a code consisting of various audible pitches and pitch combinations and seems to me quite limited in its usefulness.

Since I presume to make these comments on the Optacon and on the speech-reading machine, I believe I should offer some explanation as to my qualifications. I have been blind since the age of two years. I hold three university degrees, including the doctorate. I have taught Linguistics and foreign languages in college and university for nearly forty years. I have been dependent on enormous amounts of reading since my high school days. I read braille and New York Point, have used the so-called "Talking Book" in all its forms quite extensively, and have read great quantities of material in various languages with the Optacon since June 1972. I have also taught fifteen other people how to use the Optacon and have established the International Association of Optacon Users. In this last connection I have received hundreds of letters from Optacon users and interested people from all parts of the United States and from more than a dozen foreign countries. What I have to say about reading for the blind is based, for the most part, on my own long experience, but also to some extent on information I have received from other blind people. I wish to insist that even though there are many highly trained professional workers who are giving important help in various ways to alleviate the difficulties of blind people, no decisions affecting us should be taken without hearing from those of us who have had to face the problems personally and to solve them in order to live and achieve. I also wish to insist that blind people are a cross section of the population and that there are as many individual differences among them as among any other group of similar size. The expression "the blind" is extremely dangerous, because it lumps together hundreds of thousands who have nothing in common but one serious misfortune.

1. A speech-reading machine, if and when it is fully developed, assigns specific sounds in computer language to specific letters and letter combinations. It is programmed for a specific language, because each language assigns different values to the symbols it uses for writing, as well as to the various combinations of these symbols. If the speech-reading machine is to be used for more than one language, it must be programmed separately for each new language.

The Optacon presents each image it sees in tactile form. This means that the blind reader feels in enlarged shape exactly what is on the printed page. If one knows Greek or Russian, he can read either of those languages quite as well as his own, whatever it may be, even though the alphabets used are quite different.

2. The speech-reading machine, no matter how extensive the programming, will sometimes run into symbols for which it has not been programmed.

As stated above, the Optacon can present any symbol, whether in mathematics, linguistics, or any branch of technology exactly as it appears to the sighted reader, as far as its shape is concerned.

3. The speech-reading machine, when properly developed, could be set to read at whatever speed the listener wishes.

The Optacon will probably never enable even a skilled reader to read at high speed. After having read thousands of pages of material, I can attain at times to speeds of around a hundred words per minute, depending on the material, the quality of the print, and various personal factors. This is not fast reading. We still do not know what the maximum possibilities are. This must await the achievements of young people who began using the Optacon early in life.

4. The speech-reading machine will, as far as we can now see, be rather large and heavy and quite expensive to produce.

The Optacon is small and light, about the size of a small tape recorder or ordinary book, and it can easily be carried about by the owner and used when needed. The price of the Optacon has been lowered three times since marketing began and is already within the reach of many individuals and practically all institutions and agencies.

5. The speech-reading machine will be relatively easy to learn to operate.

The Optacon requires extensive training and practice. The reader has to have patience and persistence in order to develop useful speeds with the Optacon.

6. The speech-reading machine produces monotonous, inhuman sounds that can only approximate human speech and will at times be difficult to understand. Intonation patterns, which are so important a part of any human language, will be largely unattainable.

The Optacon transmits print to the brain in very nearly the same way that the eye does, allowing the brain to associate symbols and symbol combinations with known speech patterns.

7. The speech-reading machine does not present the printed page to the reader, but only certain sounds that he can learn to associate with what is meant to be said.

The Optacon allows the reader to know all about the printed page: where the margins are, where the page numbers are, where the punctuation marks are, how words are spelled, when they are hyphenated -- in short, every detail except color that the sighted person sees.

8. It would be possible to place a speech-reading machine in a library, if there were a special room for it, and in this way a number of people might be given access to it at different times.

The Optacon is a personal adjunct. We who make extensive use of it think of it much as one would of his eye glasses.

9. The speech-reader in its present form cannot be used to check material being typed.

The Optacon can be of great value to a blind typist. It can be used to proofread and correct typed material. It is also quite useful in making revisions. If one is interrupted and forgets exactly what was written last, the Optacon can let him know in a few seconds.

10. The speech-reading machine would be quite difficult to use with reference books, since a large amount of unnecessary reading would be required to get to the entry desired.

The Optacon is invaluable in this respect. I use encyclopedias and dictionaries in a number of languages. With practice this can be done quite rapidly.

11. The speech-reading machine cannot be used to examine a line drawing, geometric figure, or the like.

The Optacon can be so used.

12. A speech-reading machine cannot enable a blind person to use a card catalogue or to read labels on containers.

The Optacon is quite useful in these ways, especially to blind people who live and work alone.

The Optacon is, in my opinion, the most important breakthrough for blind people since the invention of the dot code systems. One must emphasize, however, that it is not equally useful to all blind people. It is extremely important to some of us, of limited value to others, and to still others, not useful at all. It does not replace braille or the "talking book", but it supplements them. I believe the speech-reading machine, if and when it is properly developed, will be of value within its own limitations. It will not replace the Optacon. It is conceivable that modern technology will make it possible to combine the speech-reading machine with the Optacon, so that they could be used separately or together. This would indeed be a quantum leap forward.

Robert Stilwell
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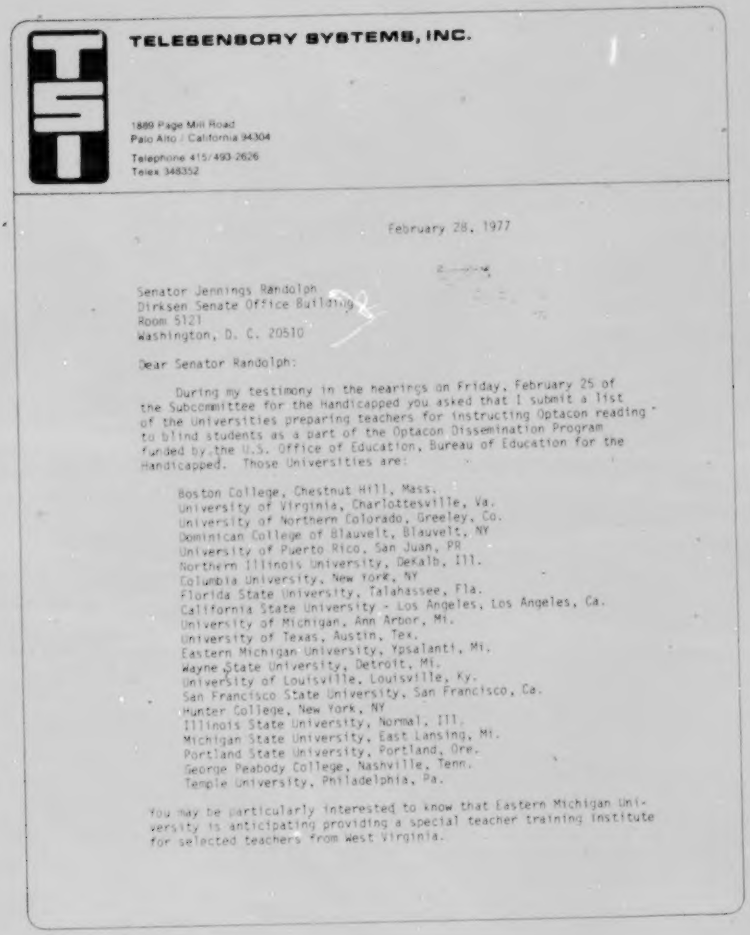
304/296-3148



TELESENSORY SYSTEMS, INC.

1889 Page Mill Road
Palo Alto / California 94304
Telephone 415/493-2626
Telex 348352

February 28, 1977

Senator Jennings Randolph
Dirksen Senate Office Building
Room 5121
Washington, D. C. 20510

Dear Senator Randolph:

During my testimony in the hearings on Friday, February 25 of the Subcommittee for the Handicapped you asked that I submit a list of the Universities preparing teachers for instructing Optacon reading to blind students as a part of the Optacon Dissemination Program funded by the U.S. Office of Education, Bureau of Education for the Handicapped. Those Universities are:

Boston College, Chestnut Hill, Mass.
University of Virginia, Charlottesville, Va.
University of Northern Colorado, Greeley, Co.
Dominican College of Blauvelt, Blauvelt, NY
University of Puerto Rico, San Juan, PR
Northern Illinois University, DeKalb, Ill.
Columbia University, New York, NY
Florida State University, Talahassee, Fla.
California State University - Los Angeles, Los Angeles, Ca.
University of Michigan, Ann Arbor, Mi.
University of Texas, Austin, Tex.
Eastern Michigan University, Ypsalanti, Mi.
Wayne State University, Detroit, Mi.
University of Louisville, Louisville, Ky.
San Francisco State University, San Francisco, Ca.
Hunter College, New York, NY
Illinois State University, Normal, Ill.
Michigan State University, East Lansing, Mi.
Portland State University, Portland, Ore.
George Peabody College, Nashville, Tenn.
Temple University, Philadelphia, Pa.

You may be particularly interested to know that Eastern Michigan University is anticipating providing a special teacher training institute for selected teachers from West Virginia.

I was very interested in the economic arguments you provided in the hearings based on the return in taxes which results from rehabilitating a handicapped individual. Along this same line, you might be interested in knowing that by the end of the first five years of TSI operations, TSI's corporate income tax payments plus the income tax witheld from our employees exceeded the government's investment in the development of the Optacon. Thus, the government funds used to develop the Optacon have generated a return in many ways, including:

1. TSI corporate income tax payments
2. Creation of over 120 jobs and corresponding employee income tax payments
3. Manufacture of products which in many cases have resulted in employment of a blind individual.

During my testimony, you also asked about ways in which the public was being made aware of the Optacon Dissemination Program. As an example of what one area of the country is doing in this regard, I enclose a letter from the New Mexico School for the Visually Handicapped.

I want to thank you and your staff once again for your help and assistance. I hope you can continue your work on extending the Education of All the Handicapped Act and the Rehabilitation Act. If I can be of any help, please let me know.

Sincerely,

James C. Bliss

James C. Bliss, Ph.D.
President

JCB/jms
Enclosure

THE NEW MEXICO SCHOOL FOR THE VISUALLY HANDICAPPED
ALAMOGORDO, NEW MEXICO 88310
Telephone (505) 437-3505

January 4, 1977

Josephine Taylor
Office of Education
Bureau of Education for the Handicapped
7th and D Streets, SW
Washington, DC 20202

Ms. Taylor:

We would like to thank BEH and the Office of Education for an excellent program: the Optacon Dissemination Project. I attended the teacher training workshop at the University of Northern Colorado last July. The quality of the workshop (under the direction of Dr. Grace Napier of UNC and Larrie Teich of the TSI staff) contributed to an enthusiasm felt by all of us who participated to begin Optacon training with our own students. After several weeks of the program here at NMSVH, I am not the only one who is excited about the prospects for several of our students' potential with the Optacon.

A serious attempt has been made to give some wide exposure to our Optacon training program. The following are some examples:

1. Featured in several articles in the local newspaper
2. Featured in a campus in-service training workshop
3. Featured in the annual NMSVH Open House activities
4. Featured on a television program (KBIM-TV in Roswell)
5. Featured on a local radio program (KINN in Alamogordo)
6. Presentation at the statewide AAWB convention
7. Presentations for local civic groups
8. Presentation before the local chapter of the Institute of Electrical and Electronic Engineers
9. Demonstration for Governor Jerry Apodaca and members of his staff on a recent campus visit (Governor Apodaca later gave a glowing account of the Optacon and our school on his regularly scheduled TV program.)
10. Provided a "first exposure" experience with the Optacon for several blind adults

Sandy Ruconich, a blind instructor on our staff, received Optacon training in Palo Alto last summer. With less than five months' experience with the Optacon, she was timed at more than 60 words per minute and demonstrates complete mastery over a wide variety of printed materials. She has been involved with me from the beginning of the year in establishing our Optacon program at NMSVH. Her first-hand learning experiences have proved invaluable in the planning, execution and evaluation of our student training to date.

Our program at NMSVH began with an assessment of fourteen students' observed potential to use the Optacon at the beginning of the school year. Three students were then chosen for training:

> The first student to begin a daily schedule with the Optacon is a very bright 10-year old girl who has only enough vision for travel in daylight. Although an accomplished Braille reader for her age, she was familiar with print and demonstrated excellent recognition skills with the Optacon from the very beginning. She mastered the entire upper and lower case alphabet as well as numbers and punctuation with little difficulty. She reached the level of "independent reader" very quickly, and spent much more of her time with the Optacon refining her tracking skills which proved to be her weakest area. Recently she returned to the public school in Gallup, New Mexico. Knowing her joy at learning to read with the Optacon and her love for reading in general, it is difficult to think of her not having access to an Optacon. In both spirit and demonstrated skill, she deserves the advantages opened up to her in her early training with the Optacon.
>
> The next student trained on the Optacon is an 18-year old girl whose primary language is Spanish. She is an interesting bilingual experiment in our training program. Although almost all of her early training was conducted in English, she has now reached the level of proficiency with the Optacon that she has begun to explore reading materials in her own more comfortable Spanish language. The fact that Miss Ruconich understands Spanish has been the key for this student's rewarding experience with the Optacon. There is little doubt that she will be a successful bilingual Optacon reader.
>
> The third student chosen for NMSVH Optacon training is a 14-year old boy. He had heard quite a bit about the Optacon last year, and was obviously motivated to gain access to a wide variety of printed materials. Since he is "gadget oriented," he took quickly to the machine itself. His recognition skills were excellent from the beginning, as was his ability to manipulate the camera and controls. At first he seemed to take a leisurely approach to the actual reading process, but recent emphasis upon speed-building techniques seems to have taken hold. He has recently been timed at between 25-30 words per minute, and has shown an increased speed almost daily, being able to sustain the more rapid reading rate for longer periods each day. He delights in his own success with the Optacon and wants to demonstrate for anyone who will watch or listen.

For the first two weeks of each student's training, daily two-hour sessions were held. After that period, students returned to a one-hour-per-day schedule. The students have taken the Optacon to their dormitories overnight (on a rotating basis) and have also taken the Optacon home with them over vacation periods to show off their skills to the rest of their families. They are now beginning to take the Optacon into some of their regular classes for use with some printed classroom materials.

NMSVH has extended its services and materials to students and teachers in public school programs throughout the state. The Optacon became a part of those efforts recently. Through cooperative efforts with the Special Education Division of the State Department of Education, we conducted an Optacon assessment for a very bright ninth grade girl in the Los Alamos Public Schools. The one-hour assessment (her first exposure to the Optacon) was "performed" before an audience of some 50 persons -- her parents, teachers, guidance counselors, administrators and some interested fellow students. The results were astounding. The girl demonstrated an immediate mastery of the recognition skills required for Optacon reading. She even read flawlessly from a poem (in upper and lower case letters) at the back of the training manual sequence -- an accomplishment virtually unprecedented except by those who have undergone days of intensive training. She was excited, her audience was excited, we were ecstatic. General agreement was reached upon the spot that she must have access to an Optacon. Her parents cannot realistically afford the purchase price. Provisions have been made for her to spend two weeks on our campus for a short training period beginning next week. We would naturally provide any follow-up services which would be necessary. The dilemma is obvious: How does she obtain an Optacon?

As you can tell, we are pleased with the success of our program to date. We are aware that some "student sets" are available as a part of the Optacon Dissemination Project for trained students. Naturally, we would like to request that all four students receive an Optacon. Their efforts are worthy of reward. But most especially, we would urge your serious consideration of the plight of the two girls who are now in public school programs. Without the help of the Office of Education, there is every chance that their training will have been for nought. That is a frustration in learning that is difficult to reconcile.

I apologize for this lengthy letter. But all of us at NMSVH are most appreciative of the new possibilities opened to some students because of the Optacon Dissemination Project. It has been a uniquely rewarding experience for some of us who revere print. If some students can receive Optacons for their own use, then the benefits are still to come. We would be glad to forward any additional documentation required.

Sincerely,

Bill Davis

Bill Davis
Media Coordinator

BD/pw

cc: Steve Smith, NMSDE; Dr. Grace D. Napier, UNC; Rick Plesia, TSI;
Larry Teich, TSI

Encl.

[illegible] NMSVH

[illegible] aid for blind

By JOHN VALLEJOS

"For the first time in my life I walked into a bookstore and bought two paperback books. This was the greatest sense of freedom I have ever experienced."

These are the words from Sandy Ruconich, a blind instructor at the New Mexico School for the Visually Handicapped, who was talking about one of the first things she did after completing training on use of the "Optacon", a machine which for the first time is allowing the blind to read printed material.

The Optacon, the name derived from the term optical to tactile converter, functions by having a camera trace over the letters in a line of print, which translates what the camera sees into a vibrating facsimile of the actual print letters. The user of the Optacon "reads" with the left index finger in an area from the finger tip to just below the first joint. The vibrating letters move across the fingers as the camera is moving across the line of print.

Miss Ruconich and Bill Davis, media co-ordinator at NMSVH, underwent training with the Optacon last summer. Miss Ruconich spent two weeks in Palo Alto, Calif. at Telesensory Systems, Inc., the makers of the Optacon, learning to read with the machine, and at the same time Davis was at the University of Northern Colorado in Greeley attending a workshop which dealt with teaching Optacon.

Miss Ruconich and Davis began the Optacon training program at NMSVH in September by doing an assessment of potential abilities with 14 NMSVH students. Amy Martin, Beatrice Gonzales and Robert Romero are the three students selected by Miss Ruconich and Davis to undergo initial training. The three students first were given, one at a time, a two-week, two-hour-per-day training period in familiarizing them with the apparatus for moving the camera across the line of print. All three students have mastered the upper and lower case alphabet and use of the controls and camera.

Miss Ruconich and Davis have expressed their belief that all three students will become "independent" readers with the Optacon.

Two optacons are used in the training, one was purchased by NMSVH and one provided under a federal program called the Optacon Dissemination Project through the Office of Education. Also provided under the program was a visual display for the teacher, teaching manuals and other accessories.

The Optacon reader is able to look at only one letter at a time. The skilled Optacon reader does not actually identify every letter that passes under his finger but rather predicts on the basis of the first few letters and context what the word is going to be. This is necessary to gain a maximum speed with the Optacon. After extensive use of the machine, the average reading speed is said to be in the neighborhood of 40 to 50 words per minute.

Miss Ruconich has been reading with the Optacon for five months now and already has been timed at 60 words per minute on some material. It should be noted that reading speed varies with the nature of the material. Telesensory Systems, Inc. claims that 90 to 100 words per minute on the fastest any known Optacon reader has read. One of the persons timed at this speed was the daughter of a man who took part in development of the Optacon, which began in 1963. Miss Ruconich does not hesitate to admit she is after the top reading speed.

Davis is quick to point out that the Optacon should not be considered a substitute for braille or for recordings for the blind.

"For example, it's not feasible to sit d read 'War and Peace Optacon; Braille or ing would be much fa Optacon should be co a complementary medium for the blind plained.

"The revolutionar about it is that it pro blind person with im access to print. It is e ciently used on shor tions of print such as chapters in a book, personal mail which written, daily memos encountered in a work situation or reading directions on food preparations, etc."

Another important aspect of the Optacon is that blind persons have been able to hold jobs doing work they previously were unable to perform such as bank telling, computer operation and legal secretary work.

Both Miss Ruconich and Davis stress that Optacon training is a very long, hard process.

"The person must be motivated to gain immediate access to print. The process of learning to read with the Optacon is somewhat similar to a child's learning to read for the first time or a person learning to read in a new language," Davis said.

In addition to the training provided to NMSVH students, Davis and Miss Ruconich have given several blind adults exposure to the Optacon and its possibilities. In their hopes to publicize the potentials of the Opticon, Miss Ruconich and Davis have been giving demonstrations to various civic groups; they have appeared on Roswell television station KBLM, radio station KINN and soon will be giving a presentation to an engineers group.

Senator RANDOLPH. Mr. Jenkins and Mr. Williams, we are happy to have you before the subcommittee.

If I may call you Bud, I will do that.

You introduce yourself, tell us the position you hold and then begin your testimony.

STATEMENTS OF CORNELIUS L. WILLIAMS, PRESIDENT, NATIONAL REHABILITATION ASSOCIATION, INC., HUNTINGTON, W. VA., AND WILLIAM M. JENKINS, PRESIDENT, NATIONAL COUNCIL ON REHABILITATION EDUCATION, MEMPHIS, TENN.

Mr. WILLIAMS. I am Cornelius L. Williams, from Huntington, W. Va. I am president of the National Rehabilitation Association.

First, let me say that I am extremely pleased to have the opportunity to travel here from our great State of West Virginia and appear before you—and other members of this subcommittee—to speak on matters that we've all been concerned with for many years. Also as president of the National Rehabilitation Association, I am happy to represent more than 30,000 members who are a part of an organization that has been the leader in the field for more than 50 years.

May I depart, Senator, from my text just a second.

Professor Stilwell is a self-effacing person, and he did not tell you since his retirement he probably has been as busy as before his retirement. He has trained hundreds of people, hundreds of blind people to use the Optacon.

He has spent much of his time and effort and enduring patience in doing this.

The people in West Virginia, blind people, in the surrounding area are much better off for it.

Before I go further, I would like to personally thank you for your continued involvement and deep commitment to the principle of viable rehabilitation programs for handicapped people. This commitment has been a positive force on the lives of thousands of handicapped people in this Nation.

Joining me here at the table on my left is Fred Tammen, director of government relations for NRA.

On my right is Dr. William Jenkins, an officer of the National Council of Rehabilitation Education.

Dr. Jenkins will specifically direct his comments toward rehabilitation training. The National Rehabilitation Association is supportive of the comments made in Dr. Jenkins' testimony.

Mr. Chairman, I am going to make a few brief comments to highlight the complete statement that I would like to submit for the record.

Senator RANDOLPH. What do you do in West Virginia?

We know of the office you represent here.

Mr. WILLIAMS. I am a district supervisor in the West Virginia Division of Vocational Rehabilitation.

Senator RANDOLPH. How many years of experience have you had?

Mr. WILLIAMS. Twenty years.

Senator RANDOLPH. Where were you born?

Mr. WILLIAMS. Cowen, Webster County, not far from Randolph County.

Senator RANDOLPH. That is good.

This can be off the record.

[Discussion off the record.]

Senator **Randolph**. Proceed.

Mr. **Williams**. Over the past year and a half, we have been involved in a great deal of discussion and legal proceedings regarding the organizational unit requirements of the Rehabilitation Act of 1973. Although we feel that the language of the act is clear, there have been efforts to misconstrue its meaning resulting in a few States "experimenting" with various administrative structures.

Although the National Rehabilitation Association has always supported and encouraged cooperative efforts and relationships amcng human service agencies, these experimental attempts have gone beyond that type of structure and relationship.

A few States feel that they have the legal authority to organize their vocational rehabilitation agencies administratively, in any manner they choose regardless of legal requirements, clear congressional intent and a history of effective, successful programs as currently prescribed by law.

We have seen instances in the past where the administration's efforts in monitoring the programs were significantly limited or even nonexistent. We have seen efforts by a few States to subvert funds appropriated for vocational rehabilitation services to other areas which was clearly not consistent with the approved services plan.

Senator, I believe that you and I both agree that this is not the time to allow this program to drift or to allow its purposes to be diluted by inappropriate experimentation or subversion of funds. I think it is time to reassert our position with respect to the vocational rehabilitation program. We ask that this subcommittee use its influence and exercise its oversight function in monitoring the effectiveness of the Rehabilitation Services Administration, in its efforts to enforce the requirements of the act.

As I indicated earlier, Dr. Jenkins who has accompanied me to this table will be discussing rehabilitation training in detail. The NRA believes that a well balanced program of research and training is essential to the growth and effectiveness of the entire rehabilitation effort.

Also, I would like to say that we are gravely concerned over the administration's continued effort to reduce training funds.

Dr. Jenkins will speak in detail to that point in his testimony. Finally, with respect to training I would like to say, that the NRA believes that a complete evaluation of the training program and training needs is in order. A directive from this subcommittee would certainly facilitate such a study.

Currently, the NRA has two major concerns relative to title V authorities. First of all, we are concerned about the lack of enforcement activities on the part of the Architectual and Transportation Barriers Compliance Board. The Board was created through section 502 of the Rehabilitation Act of 1973, to enforce architectual and transportation accessibility standards mandated by Public Law 90-480. However, since the Board's creation there have been few, if any, investigations or enforcement of accessibility standards.

It is the feeling of the NRA that the governing Board which consists of the Secretaries of the various executive departments of the Federal Government presents an unworkable situation. It would appear the Secretaries or their representatives seem to be more interested in protecting their own department from accessibility investigations than making the department available for appropriate surveys. We ask this subcommittee to consider broadening the representation of the governing Board to include not only Government representatives but also individuals with disabilities, community leaders and others.

Consideration should be given as to whether the Compliance Board could be more effective if they were in an agency other than HEW, such as GAO.

The other title V program that gives us great concern is section 504 of the Rehabilitation Act which was created to help assure that the rights of handicappd persons are not violated. It has been more than 3 years since the passage of that legislation, yet HEW has failed to promulgate final regulations to implement that section of the bill.

We ask this subcommittee to strongly urge HEW——

Senator **Randolph.** Do you think it has been on account of no money? You said they have not done it. Sometimes it is because they have not had the funds with which to do it. I am just trying to be very fair, as you would be. That may have been a hindrance.

Mr. **Williams.** We think the money has been available.

I understand there is not a line item in the budget for this, and it perhaps would be beneficial and helpful if there were a line item.

Also, we would want the committee to consider if HEW or the General Accounting Office should administer that particular program.

Senator **Randolph.** That is a concern we can certainly check.

Mr. **Williams.** Repeating this again, the other title V program that gives us great concern is section 504 of the Rehabilitation Act which was created to help assure that the rights of handicapped persons are not violated. It has been more than 3 years since the passage of that legislation, yet HEW has failed to promulgate final regulations to implement that section of the bill. We ask this subcommittee to strongy urge HEW to publish final regulation for section 504 and move forward with the program.

Senator **Randolph.** At this point, Senator Stafford and I would like the record to indicate that Secretary Califano has accepted our invitation to testify on March 22 and that will be an appropriate time for us to question him about many of these concerns that you, Mr. Williams, and your associates are bringing to our attention todav.

Your remarks are very helpful, and we will ask these questions. We can have the new Secretary, in a sense, spell out what he proposes to do and what programs he believes can be funded properly.

Mr. **Williams.** There is much concern, Senator Randolph, all over the country on this matter.

Since 1959, the National Rehabilitation Association has been on record supporting an "independent living" authority to be included in the rehabilitation legislation. Such authority, although goal oriented, would allow services to be provided to severely disabled individuals without declaring a vocational objective. These individuals would not normally be eligible for services under title I provisions.

The authority for the provision of "independent living" services should be under a new title in the Rehabilitation Act but separate and apart from the basic State program services.

However, it is envisioned that all referrals for service should receive the same diagnostic and evaluation services to determine if vocational potential is present.

Depending on the outcome of the diagnostic studies the disabled person would receive services either under Title I or through the special authority for independent living services.

I have discussed this issue in some detail in my statement that I have submitted for the record and the Association and staff is available for further comment.

May I just say in addition, Senator Randolph, that in West Virginia we have a homemaker program in which we have counselors who work only with severely disabled homemakers.

I have seen miraculous results from this. I have seen people who have been invalids needing care for numbers of years, who, after rehabilitation center services and training by the rehabilitation counselor, who has a background in home economics, be able to perform the normal work expected of a homemaker on a day-to-day basis.

We feel a similar type of program could and should be made available to other severely handicapped individuals who may not have a potential for competitive employment or perhaps even sheltered employment.

Before I conclude my testimony, Senator Randolph, may I be indulged for a personal remark.

This is my first experience in testifying before a legislative body on the Federal level. I could not be more honored than for that first experience to be before the distinguished and illustrious senior Senator from my home State of West Virginia.

Senator RANDOLPH. I am delighted that a fellow West Virginian is here testifying.

I am grateful for your comments.

Mr. WILLIAMS. I think I should point out also for some of the younger people that you are not a latecomer in your commitment to handicapped people.

The Randolph-Sheppard Act was, I believe, passed in 1936, which provided for the vending stand programs for the blind in Federal buildings.

That is a few years ago since your commitment was made obvious to handicapped people.

Thank you.

Senator RANDOLPH. I have said very often and I repeat it today. There is one additional personal, as well as official, job to which I want to renew my commitment, and that is that we have here on Capitol Hill a vending facility to be operated by the blind.

Do you realize these facilities exist in the 50 States, all political subdivision levels, private industry included, and here on the Hill where the law was written we have not a single vending facility operated by the blind?

Mr. WILLIAMS. I think that is indeed unfortunate.

Senator RANDOLPH. We have run into that barrier, and we are going to have to overcome it.

I do not speak this way very often.

We have not overlooked this project—it is just that we have not been able to do it just yet.

We will have a special hearing on that subject. We will write the letters and confer with people on the subject first.

Mr. **Williams**. Perhaps that is necessary.

Senator **Randolph**. Thank you for your testimony.

[The prepared statement of Mr. Williams on behalf of the National Rehabilitation Association, Inc., follows:]

STATEMENT OF THE
NATIONAL REHABILITATION ASSOCIATION, INC.

BEFORE THE

SUBCOMMITTEE ON THE HANDICAPPED

OF THE

SENATE COMMITTEE ON HUMAN RESOURCES

IN HEARINGS CONDUCTED

ON PROGRAMS FOR DISABLED PERSONS

Mr. Chairman, I am Cor [illegible] Williams, President of the National Rehabilitation Association. The National Rehabilitation Association appreciates the opportunity to appear before the Subcommittee on the Handicapped to discuss important matters of common concern.

We would like to express our appreciation to this Subcommittee for expeditiously conducting this series of oversight hearings on the important issues at hand. This Subcommittee is to be commended for its continuous record of support for comprehensive and well-balanced legislation designed to meet the needs of handicapped persons, which is typified by the Rehabilitation Act of 1973 and its amendments.

Senator Randolph, we expecially want to thank you, as Chairman of this Subcommittee, for your personal, continual commitment to the provision of effective programs for handicapped persons in our nation.

The National Rehabilitation Association has appeared before this Subcommittee many times, and I feel certain that you are familiar with the fact that the National Rehabilitation Association is a fifty-two year old, nonprofit, voluntary association of approximately 25,000 members who are professional persons in the field of rehabilitation, consumers, volunteers, students, and interested citizens. Our prime purpose is to advance the rehabilitation of all handicapped persons.

At this hearing, the National Rehabilitation Association would like to comment on the following areas of concern:

- A. State Organization of Rehabilitation Programs
- B. Rehabilitation Research and Training
- C. Title V Programs
- D. Independent Living

STATE ORGANIZATION OF VOCATIONAL REHABILITATION PROGRAMS

The National Rehabilitation Association strongly endorses and supports the state-federal administrative structure for carrying out the programs of the Rehabilitation Act of 1973, as amended.

We support the language of the law (Section 101[a], Public Law 93-112) and the intent of Congress with respect to the prescribed state organizational structure to carry out programs which are described and funded under the Act. Specifically, we subscribe to:

1. The designation of "a State agency as the sole State agency to administer the plan." (Section 101[a][1][A]).
2. The provision "that the State agency designated... shall include a vocational rehabilitation bureau,

> division, or other organizational unit which (i) is primarily concerned with vocational rehabilitation, or vocational and other rehabilitation, of handicapped individuals, and is responsible for the vocational rehabilitation program of such State agency, (ii) has a full-time director, and (iii) has a staff employed on such rehabilitation work of such organizational unit all or substantially all of whom are employed full-time on such work." (Section101[a][2][A]).

Throughout the years the National Rehabilitation Association has supported Congressional efforts to preserve the administrative integrity of the state vocational rehabilitation agency. It is the interpretation of the meaning of this organizational unit which is causing problems today. Although the meaning of the present law seems reasonably clear and its intent is certainly clear, it continues to present problems. There have been no serious problems arising in the administration of rehabilitation in an "umbrella" agency, if the letter and spirit of the law is obeyed. Rehabilitation agencies in a number of states operate side-by-side with other human service agencies, with services being coordinated with the services of other agencies through its own efforts and those of the "umbrella" agency. Under this arrangement, they have been able to perform the functions which Congress and the states expects of them.

In a few states, however, an effort has been made to cut the line of authority between the director of vocational rehabilitation and rehabilitation agency personnel by requiring rehabilitation agency personnel to report through an individual who is not an employee of the rehabilitation agency. We firmly believe that this arrangement is not legal, and we are pleased that the Department of Health, Education, and Welfare has rejected service plans of this kind which are presented for approval.

It is not the intention of NRA that the Federal law should interfere with the states requiring that the vocational rehabilitation organization unit comply with reasonable statewide standards in the areas of personnel administration, accounting and reporting procedures, and general management concerns. Our concern is that there not be an administrative arrangement which removes the director from control of the program he is expected to administer and prevent him from being an advocate of the handicapped individual the program is designed to assist.

At present, the general and blind vocational rehabilitation agencies across the country find themselves in a variety of organizational configurations within particular state governments.

These structural arrangements generally locate the vocational rehabilitation agency (1) as standing alone; (2) within a mini-umbrella agency among rehabilitation-related agencies; (3) within larger departments of state government; or (4) within large multi-faceted umbrella agencies which contain many governmental functions. Regardless of the organizational configuration within any state we insist that the organizational unit requirements be preserved.

REHABILITATION RESEARCH AND TRAINING

State service components, public and private, are faced with the necessity of understanding better the special needs of the severely handicapped, especially those who are yet unserved. New and accurate knowledge is now demanded more than ever before, for this purpose. New methods and procedures must be developed to assist in the provision of services of a vocational rehabilitation nature, especially to the most severely handicapped. New activities in rehabilitation engineering, services to the spinal cord injured, services to end stage renal disease cases and other related activities which hold promise of increasing knowledge and improving methods in rehabilitation are clearly mandated. The vocational rehabilitation program obviously cannot effectively operate basic services and carry out mandates of the Act without new knowledge and demonstrated rehabilitation processes.

This demand also sharply increases the demand for monies beyond the dollars currently available to meet these requirements.

Other areas of needed improvement for this Subcommittee's consideration are, directing research to actual and immediate rehabilitation problems and needs, the value of a national data bank of rehabilitation research information, provision of clearer mandates for dissemination and utilization of useful research findings, and greater consumer involvement in the total research program.

Excellent research information and outcomes is being realized through the efforts of many of the research and training centers. This should be maintained and strengthened. Research and demonstration activities of other types mandated by the Act should be carefully analyzed and strengthened since many improvements and techniques are being realized through this method also. Even better results would be realized with greater administrative support of Congressional intent and improved monitoring of grant applications to reduce overlapping and duplication. We believe the Act provides the potential for progressive research activities and can have a very positive impact upon improvements upon the quality of life of handicapped people.

TRAINING

A balanced program of training is imperative if states are to meet the increasing needs of greater skills needed to rehabilitate the severely handicapped. The Rehabilitation Act of 1973 provides appropriate authority and emphasis to meet this need. Rehabilitation organizations throughout the country, both public and private, have emphasized training needs, however, previous administrations have not placed appropriate emphasis on training and have not shown a real responsiveness to these needs.

If quality services are to be realized, availability of needed training must keep pace with changing priorities and goals mandated by Congress. Not only must there be college and university emphasis on rehabilitation as an academic discipline but state vocational rehabilitation agencies and support organizations must have the capability to upgrade staff through in-service training and ability to purchase or receive specialized training of a short, intensive nature to improve staff skills.

In spite of increased training demands, funds for training purposes are being decreased. We are greatly alarmed by this de-emphasis in funding for training which is in direct conflict with the Congressional intent for increased training program levels. A related concern is the staffing patterns in RSA for the purpose of training activities including the reception, handling, and monitoring of training grant applications. Additional staff is needed to more closely conform to the emphasis Congress has placed on training. The National Rehabilitation Association strongly supports statements presented by the National Council of Rehabilitation Educators.

TITLE V PROGRAMS

Title V Programs authorized by the Rehabilitation Act of 1973 are primarily for the purpose of assuring that the special needs of disabled individuals are considered in employment opportunities, and that their rights are protected in employment practices. The National Rehabilitation Association strongly supports the general concept of the Title V Programs, however, there are some issues that we feel need further exploration.

Section 502. This section establishes within the Federal Government an Architectural and Transportation Barriers Compliance Board, whose first function is to insure compliance with the standards pursuant to the Architectural Barriers Act of 1968 (P.L. 90-480), as amended. The Board consists of the heads of eight executive departments or agencies of the Federal Government. The Board's functions also include investigation and examination of alternative approaches to the architectural, transportation, and attitudinal barriers confronting handicapped individuals; determination of what measures are being taken by Federal, State, and local governments and by other public and nonprofit agencies to eliminate barriers; promotion of the use of the International Accessibility Symbol in all public facilities that are in compliance; and reporting to the President and Congress on investigations and recommendations. The National Rehabilitation Association supports the mandated functions of the Board, however, there is much concern over the lack of enforcement activities on the part of the Board, and the Department of Health, Education, and Welfare has failed to provide sufficient money for the Board or the staff to carry out its functions. Therefore, the National Rehabilitation Association would like to make the following recommendations for the purpose of strengthening the Architectural and Transportation Barriers Compliance Board.

(1) The composition of the Board itself presents an unworkable situation. It is comprised of heads of eight executive departments or agencies of the Federal Government whose job, as a Board member, is to insure that their departments comply with the accessibility standards. This

means that a particular department head is obligated to inform the total Board of his department's deficiencies as they relate to accessibility standards. There is little evidence that progress is being made on the part of the Board to carry out its mandated activities. The National Rehabilitation Association recommends that the composition of the Board be changed to reflect a broader constituency. The regulating Board should have representation that includes handicapped consumers, community leaders, and representatives of the rehabilitation profession with such representation as evident on the National Advisory Committee.

(2) The funding provided to the Board for carrying out its function appears to be somewhat of an enigma. The authorizations for appropriations are included in the Rehabilitation Act and are authorized at $1.5 million. However, when appropriations are provided, through authorities in the Rehabilitation Act, the funds for the Compliance Board Activities are included in the salaries and expenses of the Office of Human Development. The Labor-HEW Appropriations Subcommittee reports accompanying the

FY '77 appropriation bill indicated,

> "The Committee is concerned over the Departmental failure to carry out language in last year's report calling for the allocation of $1,000,000 and 20 full-time permanent positions to the Architectural Barriers Compliance and Review Board. In order that there be no misunderstandings, the Committee reiterates its position that such funds and positions be provided out of existing appropriations. The Committee expects the Secretary to allocate these funds and positions to the Board in the event they cannot effectively be allocated within the Office of Human Development itself."

Regardless, the funding level of the Compliance Board continues to be determined by the Assistant Secretary of Human Development. Until this situation is changed, the Board will continue to be ineffective insofar as carrying out its Congressional mandate.

Section 504, provides that no otherwise qualified handicapped individual shall solely, by reason of his handicap. be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. A GAO report indicated that a contact with the grants management, equal employment opportunity, civil rights office in HUD, HEW, GSA, DOD, Labor and Agriculture, reveal that, with few execptions, this section of the Rehabilitation Act had not been implemented by these federal agencies.

More than three years have passed and final regulations implementing Section 504 of the Rehabilitation Act of 1973 have yet to be promulgated. The National Rehabilitation Association has participated in numerous departmental meetings relative to proposed regulations, we have joined with many other national organizations urging the promulgation of final regulations, we have witnessed the passing of two directors of the Office of Civil Rights (HEW), however, as of this date, we still have not seen final regulations implementing Section 504 of the Rehabilitation Act of 1973.

The National Rehabilitation Association recommends that this Subcommittee strongly urge the Department of HEW to immediately promulgate final regulations for Section 504. The Subcommittee should further consider whether this Section of the Act can be properly administered by the Office of Civil Rights of HEW or whether enforcement would be more effectively carried out in another department of the Executive branch of the Federal Government. In any event, which ever department has responsibility for carrying out the law, assurances should be made for enforcement of the law on a government-wide basis and not just within the single department where the office is located.

INDEPENDENT LIVING

To receive vocational rehabilitation services an individual must have a physical or mental impairment which constitutes an employment handicap, and there must be a reasonable expectation that with the assistance of vocational rehabilitation services he will become employable. Many individuals apply to or are referred to vocational rehabilitation agencies who do not meet this test. Medical and psychological examinations indicate that a vocational outcome for such individuals cannot reasonably be attained. Such individuals cannot be accepted for vocational rehabilitation services.

Since 1959, the National Rehabilitation Association has been urging that Congress establish a program, in connection with the vocational rehabilitation program, through which rehabilitation services could be provided to such severely handicapped individuals, when such services promise to improve their ability to function at home and in the community.

In such legislation, a handicapped individual could be defined as any individual who is under a physical or mental disability so serious that it limits substantially his ability to function in his family and community life and, who with the assistance of comprehensive rehabilitation services can reasonably be expected to improve substantially his ability to live independently and function more readily in his family and community setting.

Under this type of legislation, vocational rehabilitation agencies would not provide services to severely handicapped individuals on an indefinite basis. The program is to be goal-oriented. In other words, in every case there must be a goal, the achievement of which is the object of rehabilitation services. Some appropriate goals for the provision of rehabilitation services might include the following: (1) An institutionalized individual may have as his goal improvement that will enable him to reside at home with his family. (2) A homebound immobile individual might have as his goal becoming mobile and able to take care of himself at home, so he can relieve other family members for remunerative activity. (3) A goal for a trainable mentally retarded person might be to achieve the ability to attend and participate in the program of an activity center, in which he may earn something, but in which work will be secondary to other gains. (4) A goal for an elderly blind person might be to help him achieve the ability to take care of himself at home and enable him to attend to the chores that people ordinarily attend to in the course of home and family life.

It is assumed that all applicants and referrals for rehabilitation services will enter the system through the Title I program. Under this program they will receive diagnostic and evaluation services, including extended evaluation services. Following the evaluation process, the handicapped individual would be served under Title I, if he is found to have vocational rehabilitation potential and under a separate authority, if he is found not to have vocational rehabilitation potential but does have potential to improve his ability to function normally at home and in the community.

It will be necessary, of course, that a reporting system be developed which would adequately describe the severity of the disability of the individual at the time he is accepted for rehabilitation services, the goal toward which services were directed, and the degree to which the goal has been achieved. It should be emphasized that it would be a mistake for the rehabilitation agencies to use resources under this special authority to provide continuing services for an individual for an indefinite period of time. It is hoped that this Subcommittee will state clearly that is expects the program to be goal-oriented.

It is difficult for us to communicate to the Subcommittee how improtant we think such new authority would be. First, it is only fair and right that a handicapped individual be helped to gain the greatest possible ability to become not only self-supporting but independent of others for his daily needs. In addition, undoubtedly, vocational potential will be revealed in many of these individuals after rehabilitation services begin. It is contemplated that when an individual receiving comprehensive services under the Independent Living Authority, is determined to have vocational rehabilitation potential, he will be transferred to the vocational rehabilitation program, and services will be provided under Title I. On the other hand, it might be said that an individual who is accepted for rehabilitation services under Title I, and who is found after services begin not to be feasible for rehabilitation under that title, can continue to receive goal-oriented services through the Independent Living Authority. The passage of this type of legislation will result, for the first time, in a well-rounded rehabilitation program designed to provide substantial assistance to all severely handicapped individuals.

Mr. Chairman, I might add that the National Rehabilitation Association feels that the appropriation authority for a new title for independent living services should, at a minimum, be $15 million for FY 1978. We realize that this amount is far below the actual need, however, it will provide sufficient funds to carry on demonstration programs of independent living in each of ten federal regions for at least one year.

Senator RANDOLPH. Dr. Jenkins, if you will testify now.

Dr. JENKINS. I might say, I am not from West Virginia, but I do know Bud real well and we have had an opportunity to work together.

I would like to say that I am honored to be before this committee. This is a first experience for me.

My name is Bill Jenkins. I am secretary-treasurer of the National Council on Rehabilitation and Education.

I am associate professor and coordinator of the rehabilitation counselor education program at Memphis State University. The National Council on Rehabilitation Education is an organization whose membership include rehabilitation professionals who provide rehabilitation education at the gradate, undergraduate, and inservice training levels. We are an associated organization of the National Rehabilitation Association.

The first issue we would like to discuss is the importance of training to rehabilitation services. Rehabilitation personnel who provide services to disabled individuals need to be adequately trained prior to entering the profession. In addition to preservice education there needs to be a continuous effort to maintain and upgrade the skills required to achieve rehabilitation goals that lead to economic independence for the severely disabled. You are aware that the Rehabilitation Act of 1973 and its amendments require that severely disabled citizens be provided quality rehabilitation services. The adequate provision of those necessary services is dependent upon well-trained rehabilitation personnel.

Congress has not only shown their concern and support of effective rehabilitation services for the disabled but has in addition recognized the need to provide for the training of rehabilitation personnel who deliver those services. Federal support of rehabilitation training, such as rehabilitation counselors, vocational evaluators, placement specialists, and paraprofessionals is essential to the effective continuation and improvement of the rehabilitation services necessary to economic independence and self-sufficiency. Rehabilitation training has continued to enhance the competence level of rehabilitation staff across the country, including rehabilitation efforts in the State of West Virginia where there exist rehabilitation counselor education programs and a rehabilitation research and training center which are doing exceptionally fine jobs in training future and current rehabilitation personnel.

The second issue we would like to bring to your attention is the problem of funding for training programs. We realize that you do not represent the Appropriations Committee and that you cannot provide appropriations for our programs, but we do believe that you should be made aware of the problems with funding levels so that you could make your views known to the Appropriations Committee. We also think that you should be aware of the way in which funds are affecting programs.

We wish to thank Congress for its foresight in providing language in a subcommittee report that requires appropriated funds for training to be spent in the year for which they are appropriated.

Even though full expenditure of training funds is clearly stated, the Rehabilitation Services Administration and the Office of Human Development of HEW has not understood or implemented the intent of Congress regarding rehabilitation training funds.

We request that the Subcommittee on the Handicapped consider the need to exercise their oversight of funds with respect to the rehabilitation training programs. If full expenditure of appropriated training funds is not carried out then the training necessary to the provision of effective rehabilitation services to disabled persons will be jeopardized. It is our understanding despite the clear language by Congress, OHD and RSA continue to exercise their option as to funding level.

During this fiscal year 1977 over $5 million in funds have been held back from training programs. The programmatic result is the reduction of the quality of training that can be provided to effectively prepare rehabilitation personnel.

We realize this is not the Appropriations Committee, but a third issue that we would like to raise in regard to rehabilitation education and training is the issue of advanced funding. In Section 4 of the Rehabilitation Act of 1973 there is a provision for advanced funding for all rehabilitation programs.

The stated purpose of the advanced funding provision was to provide adequate notice of funding under the act to the States and to institutions receiving funds. In the case of training programs, advanced funding is absolutely essential to the smooth and efficient operation of education programs. Unfortunately, the authority in section 4 to advance funds has not been utilized by the administration for any rehabilitation programs.

With the fiscal year beginning October 1, advanced funding becomes essential for education programs. Colleges and universities begin their academic year on or about September 1 of each year. Since the fiscal year will begin one month after the academic year begins, training funds cannot be obligated to a college or university until after the academic year has begun. This makes the operation of an efficient program impossible. Training is somewhat different from other discretionary programs like research, special projects, or facilities because its programs are locked into academic year calendars and cannot respond effectively to time variances and funding notification.

A college or university cannot tell faculty that their contracts will have to wait until after the academic year begins because funds will not be received until that time. More importantly, students in need of financial support such as traineeships cannot be admitted to academic programs on the assumption that the funds will come through after they enroll.

Disadvantaged students have been known to seek out other vocational training programs or jobs because they could not wait until the last minute to receive notice of financial support that they required. In addition, severely disabled students who are being recruited need to make advanced plans for special services and accommodations necessary to their disability.

It makes more sense to provide advanced funding which allows for proper recruitment, planning, and operation of training programs.

The last issue we would like to present is the need for a manpower study. It is the belief of the National Council on Rehabilitation Education that it is necessary to conduct a comprehensive manpower needs study to assure that proper services are being provided to all disabled citizens.

This study should be broad in scope and should assess all professional fields of specialization in rehabilitation. It should identify present as well as projected service and training needs for the future in the area of rehabilitation. Such a study would be the basis for more effective planning and programing of the training resources which assure the provision of quality services to individuals with disabilities.

The National Council on Rehabilitation Education thanks you very much for this opportunity to testify, and, once again, we commend you, Mr. Chairman, and this subcommittee for the fine work you have done for disabled individuals.

I would like to mention before I close that Dr. Charles Reeder, from George Washington University, and Dr. Jose Lafitte of Gallaudet assisted me in the preparation of this testimony.

I would like to express my thanks to them.

They are in this room.

Thank you, sir.

Senator RANDOLPH. Thank you very much.

We are very concerned about these matters that you bring to our attention.

We wish to reassure you that when Secretary Califano comes before the subcommittee, on the 22d, what you said here today will form the background of very probing questions.

We thank you very, very much.

We may have questions that we will ask you to answer in writing.

[The prepared statement of Dr. Jenkins on behalf of the National Council on Rehabilitation Education follows:]

TESTIMONY OF THE NATIONAL COUNCIL ON REHABILITATION EDUCATION BEFORE THE SUBCOMMITTEE ON THE HANDICAPPED OF THE SENATE COMMITTEE ON HUMAN RESOURCES

STATEMENT OF

DR. WILLIAM M. JENKINS

SECRETARY-TREASURER

TESTIMONY OF THE NATIONAL COUNCIL ON REHABILITATION EDUCATION BEFORE THE SUBCOMMITTEE ON THE HANDICAPPED OF THE SENATE COMMITTEE ON HUMAN RESOURCES

Good Morning Mr. Chairman:

My name is Dr. William M. Jenkins and I am Secretary-Treasurer of the National Council on Rehabilitation Education. I am Associate Professor and Coordinator of the rehabilitation counselor education program at Memphis State University. The National Council on Rehabilitation Education is an organization whose membership include rehabilitation professionals who provide rehabilitation education at the graduate, undergraduate and in-service training levels. We are an Associated Organization of the National Rehabilitation Association.

IMPORTANCE OF TRAINING

The first issue we would like to discuss is the importance of training to rehabilitation services. Rehabilitation personnel who provide services to disabled individuals need to be adequately trained prior to entering the profession. In addition to pre-service education there needs to be a continuous effort to maintain and upgrade the skills required to achieve rehabilitation goals that lead to economic independence for the severely disabled. You are aware that the Rehabilitation Act of 1973 and its amendments require that severely disabled citizens be provided quality rehabilitation services. The adequate provision of those necessary services is dependent upon well-trained rehabilitation personnel.

Congress has not only shown their concern and support of effective rehabilitation services for the disabled but has in addition recognized the need to provide for the training of rehabilitation personnel who deliver those services. Federal support of rehabilitation training, such as rehabilitation counselors, vocational evaluators, placement specialists and paraprofessionals is essential to the effective continuation and improvement of the rehabilitation services necessary to economic independence and self-sufficiency. Rehabilitation training has continued to enhance the competence level of rehabilitation staff across the country, including rehabilitation efforts in the state of West Virginia where there exist rehabilitation counselor education programs and a rehabilitation research and training center who are doing exceptionally fine jobs in training future and current rehabilitation personnel.

FUNDING LEVEL OF TRAINING

The second issue we would like to bring to your attention is the problem of funding for training programs. We realize that you do not represent the Appropriations Committee and that you cannot provide appropriations for our programs, but we do believe that you should be made aware of the problems with funding levels so that you could make your views known to the Appropriations Committee. We also think that you should be aware of the way in which funds are affecting programs.

We wish to thank Congress for its foresight in providing language in a subcommittee report that requires appropriated funds for training to be spent in the year for which they are appropriated. Even though full expenditure of training funds is clearly stated, the Rehabilitation Services Administration and the Office of Human Development of the Department of HEW has not understood or implemented the intent of Congress regarding rehabilitation training funds. We request that the Subcommittee on the Handicapped consider the need to exercise their oversight of funds with respect to the rehabilitation training programs. If full expenditure of appropriated training funds is not carried out then the training necessary to the provision of effective rehabilitation services will be jeopardized. It is our understanding despite the clear language by Congress, OHD and RSA continue to exercise their option as to funding level. During this fiscal year 1977 over $5 million in funds have been held back from training programs. The programmatic result is the lowering of the quality of training that can be provided to effectively prepare rehabilitation personnel.

ADVANCED FUNDING

A third issue that we would like to raise in regard to rehabilitation education and training is the issue of advanced funding. In Section 4 of the Rehabilitation Act of 1973 there is a provision for advanced funding for all rehabilitation programs. The stated purpose of the advanced funding provision was to provide adequate notice of funding under the Act to the states and to institutions receiving funds. In the case of training programs, advanced funding is absolutely essential to the smooth and efficient operation of education programs. Unfortunately, the authority in Section 4 to advance funds has not been utilized by the Administration for any rehabilitation programs.

With the advent of a fiscal year beginning October 1, advanced funding becomes essential for education programs. Colleges and universities begin their academic year on or about September 1 of each year. Since the fiscal year will begin one (1) month after the academic year begins, training funds cannot be obligated to a college or university until after the academic year has begun. This makes the operation of an efficient program impossible. Training is somewhat different from other discretionary programs like research, special projects, or facilities because its programs are locked into academic year calendars and cannot respond effectively to time variances and funding notification.

A college or university cannot tell faculty that their contracts will have to wait until after the academic year begins because funds will not be received until that time. More importantly, students in need of financial support such as traineeships cannot be admitted to academic programs on the assumption that the funds will come through after they enroll. Disadvantaged students have been known to seek out other vocational training programs or jobs because they could not wait until the last minute to receive notice of financial support that they required. In addition, severely disabled students who are being recruited need to make advanced plans for special services and accommodations necessary to their disability. It makes more sense to provide advance funding which allows for proper recruitment, planning and operation of training programs.

MANPOWER STUDY

The last issue we would like to present is the need for a manpower study. It is the belief of the National Council on Rehabilitation Education that it is necessary to conduct a comprehensive manpower needs study to assure that proper services are being provided to all disabled citizens. This study should be broad in scope and should assess all professional fields of specialization in rehabilitation. It should identify present as well as projected service and training needs for the future in the area of rehabilitation. Such a study would be the basis for more effective planning and programming of the training resources which assure the provision of quality services to individuals with disabilities.

The National Council on Rehabilitation Education thanks you very much for this opportunity to testify, and, once again, we commend you, Mr. Chairman, and this Subcommittee for the fine work you have done for disabled individuals. I should be glad to answer any questions you may have.

Senator RANDOLPH. The final panel is Dr. Freeman, Mr. Marchand, Mr. Torner, and Mr. Williamson.

Dr. Freeman, do you want to introduce the various persons with you or let them introduce themselves at the time they speak?

STATEMENT OF JOHN M. FREEMAN, M.D., JOHNS HOPKINS UNIVERSITY HOSPITAL, BALTIMORE, MD., EPILEPSY FOUNDATION OF AMERICA; PAUL MARCHAND, GOVERNMENTAL AFFAIRS, NATIONAL ASSOCIATION OF RETARDED CITIZENS, WASHINGTON, D.C.; RONALD TORNER, EXECUTIVE DIRECTOR, TRAINING ALTERNATIVES IN LIVING AND LEARNING, KANSAS CITY, MO.; AND GORDON WILLIAMSON, CONSULTANT IN SPEECH EDUCATION AND OCCUPATIONAL THERAPY, COLUMBIA UNIVERSITY, NEW YORK, N.Y., UNITED CEREBRAL PALSY, A PANEL

Mr. FREEMAN. It is a privilege and pleasure to be able to testify before your subcommittee.

I am testifying today on behalf of the Epilepsy Foundation of America, as a member of its National Professional Advisory Board.

I am also active in the foundation's local affiliate, the Epilepsy Association of Central Maryland. By profession, I am a pediatric neurologist with one of my responsibilities being to direct the pediatric neurology service of the Johns Hopkins Hospital in Baltimore.

I am pleased to have this opportunity to both reaffirm the foundation's support for the programs being discussed today and to offer observations and recommendations for improvements in State-Federal programs of service to persons suffering from epilepsy.

VOCATIONAL REHABILITATION ACT

As a major advocate and spokesman for the estimated 2 million Americans with epilepsy, the foundation is particularly interested in the implementation of the Vocational Rehabilitation Act of 1973 and its amendments, as it affects those with seizure disorders. It is the foundation's opinion that the three most important considerations in determining the success, for people with epilepsy, of the Vocational Rehabilitation Act, are: the quality and quantity of counseling available; the funds available for specialized and priority programs; and the willingness of employers to hire people with seizure.

I would like to share with you a study I directed recently in Maryland, the results of which address these three key issues. A copy of the study is attached to this testimony.

To evaluate the employment and vocational rehabilitation problems of the person with epilepsy from the client's point of view, a survey of Maryland State Division of Vocational Rehabilitation clients was undertaken. How well is the client being served? Or how well does he perceive he is being served?

[I would like to mention that this information has been requested by the National Commission for the Control of Epilepsy and Its Consequences, and will be part of its data base for recommendations.]

Our survey, performed for the Maryland Developmental Disability Council, found that rehabilitation of persons with epilepsy is far from optimal. Less than half of those who had completed rehabilitation training were employed, and only one-third of those who were employed had full time jobs. The majority of those who were employed had found their own jobs and were not working at jobs for which they were trained. The half who were not employed were not getting help from their counselor.

According to the preliminary report on "Comparison of Characteristic of Severely and Non-Severely Disabled Clients Rehabilitated during Fiscal Years 1975–1976" issued by the Rehabilitation Services Administration of HEW, of those rehabilitated during fiscal year 1975–76 the percentage of persons severely disabled with epilepsy who were rehabilitated dropped from 2.7 percent in 1975 to 2.5 percent in 1976.

The percentage of persons nonseverely disabled with epilepsy who were rehabilitated dropped from .9 percent to .8 percent. We are unable to obtain figures on the number rehabilitated who located successful placement.

However, these figures tend to support our contention that fewer persons with epilepsy are being rehabilitated through the vocational rehabilitation system.

Seventy percent of the clients in the Maryland study had continuing seizures, and half of those were having more than nine seizures per year. Most appeared to be receiving inadequate amounts of medication to control their seizures.

From the Maryland study, the most effective rehabilitation appeared to occur in those clients who have finished high school and are sent to college by vocational rehabilitation counselors. However, it is surprising that none of the clients sent to sheltered workshops for training are employed either in or out of sheltered workshops.

It would appear that the rehabilitation process is working poorly for the client with epilepsy. A more rational system is needed if State vocational rehabilitation agencies are to be effective in applying their mandate to give priority care to the severely disabled epileptic client. The following recommendations are supported by the documentation of the study in Maryland. We firmly believe these recommendations have national significance as well.

An effective liaison should be established between vocational rehabilitation counselors and a physician or clinic specializing in epilepsy to assure that clients with epilepsy receive the optimal control of their seizures without toxicity. Payment for and assurance of optimal seizure control should be the first step in the rehabilitation process.

Counselors should be educated about epilepsy and the potential of the client with epilepsy, so that they can more effectively evaluate and counsel the client and act as his or her advocate to employers. This might include the development of several specialized counselors experienced in working with clients with epilepsy to assist the general counselors and educate employers.

Group counseling sessions for clients with epilepsy should be established to provide psychological help, ego development, and motivation as part of the rehabilitation process.

Supplementry social security income should be made available to adult clients with epilepsy for a limited period of time to enable them to be rehabilitated and obtain gainful employment. The Epilepsy

Foundation of America has testified before the Social Security Administration regarding this problem. A copy of that testimony is attached. Any assistance this committee could offer in this area would be greatly appreciated.

Vocational rehabilitation counselors should be mandated, and allowed sufficient time, to provide follow-up evaluation and assistance, as necessary, to clients who have been rehabilitated.

Some modification of the case closure system should be made to encourage counselors to take on, evaluate, and retrain the severely disabled client in general, and the client with epilepsy in particular.

New incentives should be established to encourage clients to enter the system, and to encourage a counselor to seek clients with epilepsy and to utilize effectively ancillary sources of help.

New plans should be created to allow the development of rational goals by the client and counselor, so that more effective job training can be developed and implemented. Only then will job training be meaningful and linked to future employment.

A followup system should be developed so that continued psychological guidance is available, and so that problems related to the job or future employment can be expeditiously handled.

Given these general recommendations which the foundation knows your committee will consider carefully, we also suggest specifically that the category of developmental disabilities be returned to section 304(b) special projects and demonstrations. To our knowledge, no special projects in this section have dealt with developmental disabilities since this category was removed. It is our belief that the Vocational Rehabilitation Act should serve the developmentally disabled population in this special projects category.

The foundation believes there is a need to strengthen section 1361.31 of the rules and regulations as published on November 25, 1975, in the Federal Register. This section, under State plan content, sets forth the provision of services and specifically the order of selection for services. Parts (a), (b), and (d) need clarification, especially with reference to establishing which categories of clients will be served "when rehabilitation services cannot be provided to all persons who apply and have been deemed eligible."

We would recommend specific guidelines within the regulation which would specify priority categories to be served within the order of selection of services similar to the categories specified under section 1362.40, (2), of the regulations.

Any such listing should include as a priority the developmental disabilities such as mental retardation, cerebral palsy, and epilepsy with continued special emphasis on the severely disabled.

Therefore, we urge a special review of section 1361.31 of the rules, to provide more specific direction to States regarding order of selection of services to priority disability groups.

The foundation made this recommendation at the oversight hearings conducted by this committee on February 23, 1976 for the Rehabilitation Act of 1973. It was reaffirmed in subsequent testimony by a six-member panel of State vocational rehabilitation directors.

Rehabilitation of many clients with epilepsy is difficult. However, the current system expends funds with apparently little return for most clients. The expenditure of more funds to provide adequate seizure control, meaningful training and counseling, and job placement with continued counseling and followup could result in far greater return to the client who would be an employed, taxpaying citizen.

Many of the psychosocial handicaps of these individuals are better prevented than treated. Earlier intervention in the teenage period might prevent the need for rehabilitation. We believe that careful consideration be given to lowering the age eligibility for vocational rehabilitation in a concerted effort to habilitate, which we see as a primary aspect of prevention.

The Epilepsy Foundation is increasingly convinced that if a young person does not successfully enter the job market soon after he leaves high school, he is not likely to do so ever. It seems appropriate that consideration be given to early *vocational training* before the cycle of frustration and despair with unsatisfactory or no employment is begun.

In support of this concept, the Epilepsy Foundation of America has undertaken with a contract from the Department of Labor, a project to increase the employment rate of young persons with epilepsy by providing vocational training and placement services with public and private employers. EFA is working with school systems, community systems, and employers in five cities throughout the country to develop on-the-job training opportunities for 600 youths with epilepsy who are either in their last year of high school, are recent high school graduates, or who have become high school dropouts.

EDUCATION OF THE HANDICAPPED

The foundation applauds the introduction of bill S. 725 authorizing the extension of the Education for the Handicapped Act. The achievement of educational opportunity for all handicapped children should be a top national priority. The foundation offers the following recommendations concerning the handicapped education programs:

The budget requests for fiscal year 1979–80 should be consistent with previously approved authorization levels.

An assessment of all previously initiated programs designed to aid the education of the handicapped to determine if they are in practice, supportive of and consistent with Public Law 94–142. This study should be followed by recommendations necessary to coordinate existing activities in this area with Public Law 94–142.

There should be a full-scale, nationwide public education and awareness program of Public Law 94–142 so that citizens may be aware of the services they are entitled to under this legislation.

Data requirements under the legislation should be expanded to add a disability category for persons with seizures.

DEVELOPMENTAL DISABILITIES PROGRAM

It has now been 7 years since the developmental disabilities program was enacted into law. The foundation respectfully requests that this committee hold separate hearings on issues related to the operation and construction of this legislation. There has been much variation in the application and administration of the program and the foundation suggests that oversight hearings are necessary to determine the degree to which the operation of the program has met the intent of the Congress.

In summary:

The Epilepsy Foundation of America is committed to advocating strong State-Federal programs which meet the needs of persons with epilepsy. The foundation and its chapters throughout the country pledge assistance in every appropriate way to make this State-Federal partnership work most effectively to meet the needs of our constituency.

Thank you.

Senator RANDOLPH. Thank you very much, Dr. Freeman.

The oversight hearings process is important. It is important in all committees and subcommittees.

Mr. MARCHAND. I am representing the National Association for Retarded Citizens.

I want to apologize for James Chapman who was scheduled to appear this morning. A last minute conflict in his schedule prevents him from appearing here.

I would like to thank you for allowing me this opportunity to speak before you on behalf of our country's 6 million mentally retarded citizens.

As you well know, their needs are great.

They require many supportive services for their lives to be meaningful. This morning, I would like to call to your attention three Federal programs which will require your consideration and support this year.

The first of these programs is the various parts of the Education of the Handicapped Act which expire this year. In addition to part B, the State formula grant program, these programs have been a major resource for improving educational programs for handicapped youngsters. The NARC would like to focus your attention on certain of these programs.

EARLY CHILDHOOD EDUCATION (PART C, SEC. 623)

The many programs funded under the early childhood education program have served as catalysts for the development of educational programs for young handicapped children. It was not too many years ago that local units of the National Association for Retarded Citizens were operating many preschool and school programs because the public schools did not provide these services. I am pleased to say that in many instances this is no longer the case. The passage of Public Law 94-142 and the continued success of the early childhood education programs have proven to the States that handicapped youngsters can and must be educated. However, much still must be learned in order to develop appropriate programs for these children. The programs funded by this section of the act have truly pioneered curriculum development, teaching methodology, and other important components in the education of young children.

There remains a continuing need in this area, particularly in light of the preschool incentive program in Public Law 94-142. NARC envisions these programs as complementary and supportive of each other. We request your continued support of the early childhood education program.

PROGRAMS FOR THE SEVERELY HANDICAPPED (PART C, SECTIONS 621 AND 624)

By far, the most neglected children in terms of education have been those with severe handicapping conditions. Thousands and thousands of severely and profoundly retarded children have been denied access to a public education.

Again, we have great hopes that the implementation of Public Law 94-142 will solve this gross injustice. However, without the special projects for the severely handicapped in part C, school systems will lack models from which to base their programs. So much needs to be learned in this area that every resource available must be utilized to the fullest.

Mr. Chairman, for these reasons, NARC urges the committee to continue to support part C of the Education of the Handicapped Act.

PERSONNEL TRAINING (PART D)

The continued preparation of trained personnel to meet the educational needs of handicapped students is a vital concern. This is particularly important as the education community prepares to serve a new population, the severely and profoundly mentally retarded student. In order to meet this challenge, many new teachers and support staff will need to be trained to meet the special needs of these children.

Frankly, little is known on how to best educate this population. It is critical that institutions of higher education, special education agencies, and others gear up to meet this new challenge.

The National Association for Retarded Citizens suggests that certain funds in this part be set aside for the in-service training of currently available educators to prepare them immediately. Severely handicapped children cannot wait 4 or more years while new special education teachers are trained in colleges and universities. A ready pool of seasoned special educators is available for retraining. Funds from part D should be made available on a high priority basis for this purpose. The NARC recommends the committee support this effort.

Finally, Mr. Chairman, the National Association for Retarded Citizens wishes to generally support S. 725, your bill to extend most of the programs in the Education of the Handicapped Act. We urge your quick approval of this important legislation.

Our second program of concern is the vocational rehabilitation program. Recent studies have again highlighted the important role rehabilitation programs play or fail to play in the lives of mentally retarded persons. Both the Greenleigh Sheltered Workshop Study and the Urban Institute Comprehensive Needs Study point out major problems encountered by mentally retarded persons in seeking training and employment. Among these are:

Mentally retarded persons comprise more than one-half of all persons employed in sheltered workshops.

There are now almost 900 work activity centers—WAC—in the United States.

Most WAC clients are mentally retarded.

The average WAC wage is 36 cents per hour.

The average annual WAC wage is $520 per year.

Fewer than 10 percent of sheltered workshop clients are placed in jobs in industry.

There is much evidence proving mentally retarded individuals are more vocationally capable, yet they are a minority of those served under the vocational rehabilitation program.

These are just some of the conclusions of the studies. To list all of the recommendations would take all morning.

Surely, you can see that mentally retarded persons are being terribly shortchanged in the rehabilitation process. Too many are still unserved. Most who are served are being underserved. Too many workshops and WAC's are dead-end streets.

These studies, which you requested, have been available for some time now.

The National Association for Retarded Citizens strongly urges this committee to take an in-depth look at this situation.

There are still no substantial Federal funds to finance adult activity programs for those mentally retarded and otherwise handicapped individuals who, according to rehabilitation agencies, have no employment potential. Our society is relegating these unfortunate people to live wasted lives and, worse yet, to institutionalization.

It is time the Congress comes to grips with this major problem. Our organization is prepared to discuss specific recommendations with you and your staff. I urge you to conduct hearings in the near future on the Rehabilitation Act and on the concerns of Nation's "unemployable adults."

NARC's third concern is the developmental disabilities program. Your committee was instrumental in making significant changes in the Developmental Disabilities Act in 1975. Most of these changes are nearing implementation. The act expires next year. However, we must not wait until then to discuss the effectiveness of this program. We urge you to hold hearings specific to the DD program as soon as possible.

On behalf of the Consortium Concerned with the Developmentally Disabled, an organization of 19 Washington-Based national organizations, I would like to take the opportunity to thank the committee and particularly the staff of this committee in holding the hearings at such an early time in the 95th Congress.

I think these hearings set a tone for the work to be done. We eagerly look forward to working with the staff and the committee in the very near future on these areas of major concern.

Mrs. FORSYTHE. Thank you very much, Mr. Marchand. Senator Randolph has been called away to the telephone.

As you probably know, at the end of each day's hearings, Senator Randolph announces the next hearings. Since you are the second person on the panel to bring up the subject of hearings on developmental disabilities, you will be interested to know that on March 21 the subcommittee will be hearing witnesses on developmental disabilities. This is in addition to our hearings on the 28th of February and the 2d of March.

Will you continue, Mr. Torner, please.

Mr. TORNER. My name is Ron Torner.

I am currently the director of the TALL project, which is a project of United Cerebral Palsy of Greater Kansas City area.

I must say I am indeed honored to appear before this committee.

You have our testimony and you have our recommendations.

If you would please permit me to highlight some of my concerns.

I think particularly after listening to the excellent testimony presented this morning, particularly those by Dr. Viscardi and Dr. Stilwell and Mr. Bliss, it continues to amaze me that we tend to function somewhat like the man who builds a house and does not put in any windows or any doors, especially when we consider that the problems concerning technology are not so much the technology itself, but rather a commitment to use it.

When we look at the things that we do under the name of vocational rehabilitation, it is amazing.

For example, we consistently focus on the disability rather than the capability.

So what we do then is exclude people by making untested predictions and by making untested assumptions with regard to their capabilities and with regard to job matchability.

I think another interesting thing we do under the name of vocational rehabilitation, not only do we focus on disability, but we accentuate it by tending to shelter people who have a disability in places where they perform tasks that are simple and menial, which require no skill, no training, no attention, neither by the person who has the disability nor by the people who are trained.

It is also amazing that we tend to ignore the results that have been achieved by technology.

We choose instead to ponder the complexity of the problem.

I think it is very interesting that under the name of vocational rehabiliation we chose to resist the invitation from industry by choosing to explore social modes of expression rather than industrial modes.

I think there is a need for a major commitment to technology, perhaps such as that witnessed by the space program.

This is the kind of commitment that is necessary if we are to bring about the type of change that will eliminate ineffective programs.

Vocational rehabilitation is a business. It is an industry, even though it is an industry with a social purpose, and it must be conducted as such.

That means research. It means technology and especially it means cost beneficial results.

Our experience has shown that this can be done and it can be done with outstanding results.

Dr. Viscardi earlier this morning talked about outstanding results.

Dr. Stilwell talked about the things that are coming out of this work in terms of improved technological advances.

I came into the Kansas City area and identified 502 adults with so-called severe disabilities and only 5 of them were competitively employed.

What we are doing with the TALL project is taking the technology one step beyond.

We have insisted from the outset we would work as a partnership with business and industry.

They have been involved from the outset in terms of the design of the project, in terms of getting access into industry, in terms of getting access to jobs that can be modified, and in terms of engineering expertise.

It seems to me that if we look at what is rehabilitation technology, it is simply enlightened common sense aided by modern techniques.

That is the extent of the comments I wish to make.

I want to thank you for the opportunity to present this testimony and will be glad to answer any questions you may have.

I might mention that we do have a filmstrip with us in case anyone would be interested in viewing it; it has been developed by IBM to explain the TALL project, and we use it in our presentations in business and industry.

Thank you.

Senator STAFFORD. Thank you very much, Mr. Torner.

Mr. Williamson, before we go to questions, do you care to make a presentation at this time?

Mr. WILLIAMSON. Yes, sir, I would.

I am Gordon Williamson, a consultant to United Cerebral Palsy and I am grateful to report a recipient of a BEH training grant to support my doctoral study in special education at Columbia.

The subcommittee is to be applauded for proposing an extension of early childhood education sections in the Education for the Handicapped Act.

Few States at the present time have lowered mandatory entrance age for public education for exceptional children under 3 years of age.

Even in those States that do have mandatory or permissive legislation, funding is frequently inadequate and programs of early intervention are limited in number and scope.

So that until State education agencies can assume the responsibility, continued Federal support is essential, both for experimental programs on the local level as well as nationally demonstrated pilot projects.

In this regard consideration should be given to amending the Education for All Handicapped Children Act to provide eventually special services to disabled children from birth, which, of course, the State of Vermont has already done.

United Cerebral Palsy Associations has administered over the past 6 years a national infant collaborative project partially funded from BEH.

We have got 54 centers scattered throughout the country which are servicing atypical infants and their families.

I stress the positive influence on the family. I think it is well documented, the beneficial effect on the handicapped child.

What is often overlooked is the profound impact on the parents, siblings, and parent members.

We ran rather extensive interviewing procedures for parents and one of the things we asked them is what part of the early intervening program was most beneficial.

We were pleased to find that over half the parents mentioned it was the service to themselves and not the children.

There is no doubt that giving parents information, positive information, and actions to assist their child's development as well as the chance to talk about their feelings add immeasurably to feelings of confidence and comfort.

This is terribly important because there are indications that most parents institutionalize their babies because they are overwhelmed by physical management problems, either behavioral problems or in terms of management in the home.

It is apparent from the interviews that the vast majority of the parents that we have serviced feel themselves capable of managing their disabled child in the home. They say that feelings of helplessness, of not knowing what to do, have been greatly diminished by the service.

Another point I would like to make relates to the unique role that regional and national demonstration projects can play in fostering improved service delivery.

If you have some programs of broad scope, you can really facilitate planning and exchange amongst numerous levels of operation.

The national project has demonstrated this in the States of New England, in which we have got six baby programs started throughout that region, and we have really cooperated with them for a mutual effort for sharing expertise and knowledge.

One of the programs is in Burlington, Vt. Our support and our grant is about to be phased out and yet they are continuing to interact with the family which obviously means it is meaningful.

In conclusion, the Federal assistance has been an instrumental factor in the progress that has been made in servicing this population. However, a commitment to the continuum of educational services is really quite new and sustained congressional leadership is critically required.

I thank you for your attention and I am very eager for questions and comments if you have any.

Senator STAFFORD. On behalf of the subcommittee, I want to thank you all.

As you can see, the members of the subcommittee are still suffering from our multitudinous assignments to committees here in the Senate in spite of the reform that has come about.

The chairman has had to leave for another engagement.

I can assure you that your statements, oral and written, will be read by all members of the subcommittee when we consider legislation this year.

We are most appreciative of your being here.

I have one question to address to all of you now and a number that will be submitted in writing.

We would appreciate an early response to those so that they can be incorporated in the record and studied by us.

At this point let me just ask each of you in turn how many of the employees in your organization are themselves handicapped?

Dr. FREEMAN. I am not sure I can answer that on behalf of the Epilepsy Foundation of America.

I know within the local State organization, I believe it is between 30 and 40 percent are handicapped.

Senator STAFFORD. Thank you.

Mr. MARCHAND. I do not believe I can speak for the entire organization, made up of 1,900 local organizations.

I can speak to the national component of that, and I believe out of about 45 to 50 full-time people—we have had drastic retrenchment in our organization over the past 2 years because of financial situations—out of about 45 people I believe 3 or 4 are handicapped.

Mr. **Williamson.** I've been involved in early education projects so I am speaking from that perspective, and I am going to take a back door—that is, we consider the parent team members and this has been a real plus, I think, in terms of not telling them what professionals' viewpoints are, but having them actively involved in the decision-making, which is really a challenge.

I would say all 4,000 of the families that are being served have been represented as consumers of the handicapped.

Mr. **Torner.** For the national UCPA, there are 13 disabled persons out of a total of 96, 6 of whom are professionals.

We also have a Consumer Activities Committee as a standing committee of our national board of directors and it is staffed by persons with disabilities. All members of the committee are disabled and they do provide meaningful guidance to our hiring practices.

Senator **Stafford.** Thank you all very much.

[The prepared statements of Dr. Freeman, on behalf of the Epilepsy Foundation of America; Mr. Marchand, on behalf of the National Association of Retarded Citizens; Ronald Torner and Gordan Williamson, on behalf of United Cerebral Palsy Association; the American Occupational Therapy Association Inc., and the Boy Scouts of America, along with material referred to, follow:]

STATEMENT

RESPECTFULLY SUBMITTED TO THE

SENATE SUBCOMMITTEE ON THE HANDICAPPED

FOR:

OVERSIGHT HEARINGS ON

THE REHABILITATION ACT OF 1973

(PL 93-112 And PL 93-516)

ON BEHALF OF:

EPILEPSY FOUNDATION OF AMERICA
1828 "L" Street, NW
Washington, D.C. 20036

PRESENTED BY:

John M. Freeman, M.D.
Member, Professional Advisory Board
Epilepsy Foundation of America

FEBRUARY 25, 1977

My name is John Freeman and I am testifying today on behalf of the Epilepsy Foundation of America, as a member of its National Professional Advisory Board. I am also active in the Foundation's local affiliate, the Epilepsy Association of Central Maryland. By profession, I am a pediatric neurologist with one of my responsibilities being to direct the Pediatric Neurology Service of the John Hopkins Hospital in Baltimore.

I am pleased to have this opportunity to both reaffirm the Foundation's support for the programs being discussed today and to offer observations and recommendations for improvements in State-Federal programs of service to persons suffering from epilepsy.

Vocational Rehabilitation Act

As the major advocate and spokesman for the estimated two million Americans with epilepsy, the Foundation is particularly interested in the implementation of the Vocational Rehabilitation Act of 1973 and its amendments, as it affects those with seizure disorders. It is the Foundation's opinion that the three most important considerations in determining the success, for people with epilepsy, of the Vocational Rehabilitation Act, are: the quality and quantity of counseling available; the funds available for specialized and priority programs; and the willingness of employers to hire people with seizures. I would like to share with you a study I directed recently in Maryland, the results of which address these three key issues. A copy of the study is attached to this testimony.

To evaluate the employment and vocational rehabilitation problems of the person with epilepsy from the client's point of view, a survey of Maryland State Division of Vocational Rehabilitation clients was undertaken. How well is the client being served? Or how well does he perceive he is being served?

(I would like to mention that this information has been requested by the national Commission for the Control of Epilepsy and its Consequences, and will be part of its data base for recommendations.)

Our survey, performed for the Maryland Developmental Disability Council, found that rehabilitation of persons with epilepsy is far from optimal. Less than half of those who had completed rehabilitation training were employed, and only 1/3 of those who were employed had full time jobs. The majority of those who were employed had found their own jobs and were not working at jobs for which they were trained. The half who were not employed were not getting help from their counselor.

According to the preliminary report on "Comparison of Characteristics of Severely and Non-Severely Disabled Clients Rehabilitated During Fiscal Years 1975-1976" issued by the Rehabilitation Services Administration of HEW, of those rehabilitated during FY 75-76 the percent of persons severely disabled with epilepsy rehabilitated dropped from 2.7% in 1975 to 2.5% in 1976. The percent of persons non-severely disabled with epilepsy rehabilitated dropped .9% to .8%. We are unable to obtain figures on number rehabilitated who located successful placement. However, these figures tend to support our contention that fewer persons with epilepsy are being rehabilitated through the vocational rehabilitation system.

Seventy percent of the clients in the Maryland study had continuing seizures, and half of those were having more than 9 seizures per year. Most appeared to be receiving inadequate amounts of medication to control their seizures.

From the Maryland study, the most effective rehabilitation appeared to occur in those clients who have finished high school and are sent to college by vocational rehabilitation counselors. However, it is surprising that none of the clients sent to sheltered workshops for training are employed either in or out of sheltered workshops.

It would appear that the rehabilitation process is working poorly for the client with epilepsy. A more rational system is needed if state vocational rehabilitation agencies are to be effective in applying their mandate to give priority care to the severely disabled epileptic client. The following recommendations are supported by the documentation of the study in Maryland. We firmly believe these recommendations have national significance as well.

. An effective liaison should be established between vocational rehabilitation counselors and a physician or clinic specializing in epilepsy to assure that clients with epilepsy receive the optimal control of their seizures without toxicity. Payment for and assurance of optimal seizure control should be the first step in the rehabilitation process.

. Counselors should be educated about epilepsy and the potentials of the client with epilepsy, so that they can more effectively evaluate and counsel the client and act as his or her advocate to employers. This might include the development of several specialized counselors experienced in working with clients with epilepsy to assist the general counselors and educate employers.

. Group counseling sessions for clients with epilepsy should be established to provide psychological help, ego development and motivation as part of the rehabilitation process.

. Supplementary Social Security Income should be made available to adult clients with epilepsy for a limited period of time to enable them to be rehabilitated and obtain gainful employment. (The Epilepsy Foundation of America has testified before the Social Security Administration regarding this problem. A copy of that testimony is attached. Any assistance this Committee could offer in this area would be greatly appreciated.)

. Vocational rehabilitation counselors should be mandated, and allowed sufficient time, to provide follow-up evaluation and assistance, as necessary, to clients who have been "rehabilitated".

. Some modification of the case closure system should be made to encourage counselors to take on, evaluate and retrain the severely disabled client in general, and the client with epilepsy in particular.

. New incentives should be established to encourage clients to enter the system, and to encourage counselors to seek clients with epilepsy and to utilize effectively ancillary sources of help.

. New plans should be created to allow the development of rational goals by the client and counselor, so that more effective job training can be developed and implemented. Only then will job training be meaningful and linked to future employment.

. A follow-up system should be developed so that continued psychological guidance is available, and so that problems related to the job or future employment can be expeditiously handled.

Given these general recommendations which the Foundation knows your Committee will consider carefully, we also suggest specifically that the category of "Developmental Disabilities" be returned to Section 304(b) "Special Projects and Demonstrations". To our knowledge, no special projects in this section have dealt with developmental disabilities since this category was removed. It is our belief that the Vocational Rehabilitation Act should serve the developmentally disabled population in this Special Projects category.

The Foundation believes there is a need to strengthen Section 1361.31 of the Rules and Regulations as published on November 25, 1975, in the Federal Register. This section, under "State Plan Content," sets forth the provision of services and specifically the Order of Selection for Services. Parts (a), (b) and (d) need clarification, especially with reference to establishing which categories of clients will be served "when rehabilitation services cannot be provided to all persons who apply and have been deemed eligible".

We would recommend specific guidelines within the regulation which would specify priority categories to be served within the order of selection of services similar to the categories specified under Section 1362.40, (2) (of the regulations). Any such listing should include as a priority the developmental disabilities such as Mental Retardation, Cerebral Palsy and Epilepsy with continued special emphasis on the severely disabled.

Therefore, we urge a special review of Section 1361.31 of the rules, to provide more specific direction to states regarding order of selection of services to priority disability groups.

The Foundation made this recommendation at the Oversight Hearings conducted by this Committee on February 23, 1976 for the Rehabilitation Act of 1973. It was reaffirmed in subsequent testimony by a 6-member panel of state vocational rehabilitation directors.

Rehabilitation of many clients with epilepsy is difficult. However, the current system expends funds with apparently little return for most clients. The expenditure of more funds to provide adequate seizure control, meaningful training and counseling, and job placement with continued counseling and follow-up could result in far greater return to the client who would be an employed, taxpaying citizen.

Many of the psychosocial handicaps of these individuals are better prevented than treated. Earlier intervention in the teenage period might prevent the need for "rehabilitation". We believe that careful consideration be given to lowering the age eligibility for vocational rehabilitation in a concerted effort to habilitate, which we see as a primary aspect of prevention.

The Epilepsy Foundation is increasingly convinced that if a young person does not successfully enter the job market soon after he leaves high school, he is not likely to do so ever. It seems appropriate that consideration be given to early vocational training before the cycle of frustration and despair with unsatisfactory or no employment is begun.

In support of this concept, the Epilepsy Foundation of America has undertaken with a contract from the Department of Labor, a project to increase the employment rate of young persons with epilepsy by providing vocational training and placement services with public and private employers. EFA is working with school systems, community systems, and employers in five cities throughout the country to develop on-the-job training opportunities for 600 youths with epilepsy who are either in their last year of high school, are recent high school graduates, or who have become high school drop-outs.

Education of the Handicapped

The Foundation applauds the introduction of Bill S.725 authorizing the extension of the Education for the Handicapped Act. The achievement of educational opportunity for all handicapped children should be a top national priority. The Foundation offers the following recommendations concerning the handicapped education programs:

. The budget requests for fiscal year 1979-1980 should be consistent with previously approved authorization levels.

. An assessment of all previously initiated programs designed to aid the education of the handicapped to determine if they are in practice, supportive of and consistent with P.L. 94-142. This study should be followed by recommendations necessary to coordinate existing activities in this area with P.L. 94-142.

. There should be a full-scale, nationwide public education and awareness program of P.L. 94-142 so that citizens may be aware of the services they are entitled to under this legislation.

. Data requirements under the legislation should be expanded to add a disability category for persons with seizures.

Developmental Disabilities Program

It has now been seven years since the Developmental Disabilities Program was enacted into law. The Foundation respectfully requests that this Committee hold separate hearings on issues related to the operation and construction of this legislation. There has been much variation in the application and administration of the program and the Foundation suggests that oversight hearings are necessary to determine the degree to which the operation of the program has met the intent of the Congress.

In Summary

The Epilepsy Foundation of America is committed to advocating for strong state-federal programs which meet the needs of persons with epilepsy. The Foundation and its chapters throughout the country pledge assistance in every appropriate way to make this state-federal partnership work most effectively to meet the needs of our constituency.

Epilepsy
FOUNDATION OF AMERICA

Suite 406 • 1828 L Street, N.W. • Washington, D.C. 20036 • (202) 293-2930

March 23, 1977

Senator Jennings Randolph
Senate Sub-Committee on the Handicapped
Room 4232 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Randolph:

Thank you for the opportunity to appear before the Senate Sub-Committee on the Handicapped at its hearing on February 25, 1977.

I am returning the edited transcript of my testimony. Three questions were posed following my testimony, and I am pleased to provide you with my responses, as follows:

1.) Do you have additional recommendations concerning increasing a counselor's awareness of the potential of a client with epilepsy?

Response: We feel that all Vocational Rehabilitation counselors should be exposed to some training about epilepsy. This might be as little as 2 - 3 hours for the general counselor as part of their introductory training. It should include what epilepsy is, and what it isn't, mechanisms of control, as well as the rehabilitation potential of these clients. There should be periodic up-dating of all counselors.

In addition, there should be epilepsy rehabilitation specialists as part of each rehabilitation service within the state. These specialized counselors could provide specific services to persons with epilepsy as well as serve as a resource for the teaching and education of other counselors about epilepsy.

2.) How can services be designed to increase the number of successful vocational placements for young persons with epilepsy?

Response: The TAPS program designed and run by the Epilepsy Foundation of America under a grant from the Department of Labor offers a model system for how an advocate for the young client with epilepsy can be rehabilitated and placed in jobs. Early recognition of the person with a disability such as epilepsy and early evaluation and perhaps even placement in a work-study program can avoid the major psychosocial problems which are engendered by school failure, lack of work experience, and dependency. Vocational rehabilitation should be encouraged to work closely with vocational and technical education programs for the early detection and prevention of disability.

3.) What can be done to improve services for the adult with epilepsy (as compared to the current services available to children with epilepsy)?

Response: In most places specialized seizure clinics serving children, have not been instituted. Where they have been instituted, they have been uniquely successful in providing comprehensive care, and prevention of the myriad complications related to epilepsy. A few places have provided some more comprehensive services to the adult with epilepsy. Such services are badly needed. The location of suitable clinics and their tie-ins with regional epilepsy centers and medical institutions need to be established. These should be tied, for adults, to the rehabilitation process to assure optimal medical care as the first step in rehabilitation. Basic funding for such clinics must come from the federal/state system. Much of the care can be done by paramedical personnel under the supervision of a competant epilepsy specialist.

I hope that these answers will prove useful to the committee.

Thank you again for the opportunity to present the Epilepsy Foundation of America's position.

Sincerely,

John M. Freeman, M.D.
Member, Professional Advisory Board

STATEMENT OFFERED BY THE
EPILEPSY FOUNDATION OF AMERICA
TO THE
SOCIAL SECURITY ADMINISTRATION HEARING

December 8, 1976
Baltimore, Maryland

The Epilepsy Foundation of America appreciates the opportunity to comment on the Social Security Administration's proposed rules as to how a person's age, education, and work experience should affect the decision on whether to award him disability benefits under social security and supplemental security income. Our direct client work has taught us that both of these programs have great potential impact on the lives of many persons with epilepsy. Our remarks will focus on the concerns of clients who have been frustrated with the system's seeming inability to respond to their particular disabilities and circumstances.

The chief difficulty seems to be that the medical problems of epilepsy are frequently not as great as the social stigma the person with a seizure disorder faces. Therefore, often physically capable people are denied jobs based on the fear and ignorance of the employer. Understandably, the disability rating system is based on medical-mental as opposed to social criteria. However, in many instances, the person with epilepsy smoothly fits into the category of "not disabled" by the guidelines of the Social Security Administration, while potential employers label this same individual "disabled".

It is our understanding -- and our experience indicates -- that an individual with epilepsy will meet the present disability requirement if he has major motor seizures (loss of consciousness and convulsions) substantiated by clinical findings and occurring more frequently than once a month in spite of prescribed treatment. He will also usually qualify if he has minor motor seizures (alteration of awareness or loss of consciousness) substantiated by clinical findings and occurring more frequently than once a week in spite of prescribed treatment. Where adequate seizure control is obtained only with unusually large doses of medication, consideration is given to any impairment resulting from the side effects of this medication. Consideration is also given to impairment-related work restrictions, such as avoiding work around moving machinery. The proposed rules appear consistent with these practices, which we support.

In a letter to our organization dated June 5, 1975, Samuel E. Crouch, Acting Director of the Bureau of Disability Insurance, made this statement:

> "An individual with epilepsy not as severe as described above might still qualify for benefits if he has an additional impairment or if his condition, considering his age, education, and work experience, nonetheless prevents him from engaging in substantial gainful activity."

We feel the social reality of the stigma surrounding epilepsy, which at times leads to concomitant psychological problems for the individual, should be considered as one of the circumstances to be weighed in awarding benefits to a person with epilepsy. These Social Security programs foster dignity and thus will help the individual in his continued pursuit of employment. Benefits can be terminated when the person finds a job.

The employment problem is even more poignant in cases where the employer denies employment on the basis of a "history of epilepsy". The effect of this is that a person who has outgrown his seizure disorder or whose condition is otherwise in remission (no seizures, no medication) is still prevented from getting hired/promoted/trained.

A study performed by Drs. Sands and Zalkind in 1972 was designed to measure employer attitudes and practices towards persons with epilepsy in industry. It was conluded public education campaigns in themselves are not effective in changing employer attitudes. Thus, remedial measures are necessary to address the unavailability of employment at this point in time.

This experimental field study used an intensive education campaign to try to modify employer attitudes toward hiring persons with epilepsy in the experimental city; there was no campaign in the control city. No statistical differences were found in a comparison of experimental and control cities' pre- and post-data. It is suggested that traditional community education methods do not change employer attitudes or practices in hiring qualified persons with epilepsy. Despite employers' ratings of workers with epilepsy as working out well on their jobs, and as being productive, pleasant, cooperative and able-bodied they did not feel that they could hire more persons with epilepsy. The attitudes toward hiring people with seizure disorders were fixed and reported as not changing nor likely to change. This supports the common clinical experience in epilepsy that employer resistance is the largest factor responsible for unemployment or persons with epilepsy. These results have implications for the lay and professional organization conducting public education programs, as well as for the designers and implementers of programs designed to ameliorate the problems "disability" which prevent persons from making the money necessary to survive.

The age factor found throughout the proposed rules deserves special mention. Generally, the older the person is, the more likely it is that he will be ruled disabled. Our experience indicates that epilepsy can be especially disabling to young people whose education and work experience contribute nothing to their potential employability. For these young people who might lack the education and life experience to begin their working lives, the Supplemental Security Income Program, for a limited period of time, might just be the ingredient needed to avoid life long support. Many of our young clients are searching for a means of support to establish themselves as independent citizens.

The Epilepsy Foundacion of America finds that several proposed paragraphs have the potential to help those people with epilepsy who are labeled "disabled" by society. We find paragraphs (a) and (b) (1) of Section 404.1502 particularly responsive to the unique condition of epilepsy.

> Section 404.1502(a)..... When a determination cannot be made on the basis of medical considerations alone and the individual is not actually engaged in substantial gainful activity, consideration is then given to such other factors as the individual's age, education, and work experience.
>
> (b)(1) Conditions which constitute neither a listed impairment nor the medical equivalent thereof likewise may be found disabling if they constitute a severe impairment and objective evidence shows that they do, in fact, prevent the individual from engaging in any substantial gainful activity. In determining such inability to engage in substantial gainful activity, the age, education, and work experience of the individual must be considered in addition to the

functional limitations imposed by the individual's physical or mental impairments. However, the physical or mental impairment or impairments must be the primary reason for the inability to engage in substantial gainful activity.

We suggest that evidence presented in these comments shows that the stigma of epilepsy is the factor which can prevent the person with a seizure disorder itself from obtaining employment, from engaging in substantial gainful activity. This severe problem of stigma makes epilepsy unique among handicapping conditions. Additionally, we urge that individuals with expertise in epilepsy be part of procedures reviewing both disability and SSI applications from persons with epilepsy. We believe this expertise is especially needed when and if the application enters the appeal process and in vocational counseling referral.

Parenthetically, today two of my professional colleagues are attending a hearing before an administrative law judge in Washington. Our constituent is a young man whose epilepsy is not severe enough to automatically grant him benefits. Nonetheless, his age (22), together with his lack of both educational and work experience, has caused him nothing but frustration. He has met with denials by employers for two years. He contends that employers see epilepsy and automatically close the door.

We are not suggesting that the painful reality of stigma and the closed doors of employers be the sole determining factors in determining disability, but we strongly contend that they receive some recognition in weighing an individual's claim. People with medically certified epilepsy deserve special treatment.

The hundreds of letters we receive from people with employment difficulties -- boldly illustrate that the problem is real. The Social Security Disability and the Supplemental Security Income programs have the potential to impact greatly on problems caused by disability. Although we certainly do not wish to foster the impression that epilepsy per se is a disability for all, we do wish to emphasize that, for many persons with epilepsy, these Social Security programs -- at least on a temporary basis during long months and years of unsuccessful searching for employment -- are necessary to help ensure survival with dignity.

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SP.

TESTIMONY

ON

PROGRAMS FOR THE HANDICAPPED:

EDUCATION FOR THE HANDICAPPED
VOCATIONAL REHABILITATION
DEVELOPMENTAL DISABILITIES

Respectfully Submitted

to

THE SUBCOMMITTEE ON THE HANDICAPPED

OF THE

COMMITTEE ON HUMAN RESOURCES

UNITED STATES SENATE

Presented by

THE NATIONAL ASSOCIATION FOR RETARDED CITIZENS

Witness:

James Chapman

Friday, February 25, 1977

HIGHLIGHTS OF NARC TESTIMONY

- NARC strongly urges the Senate Subcommittee on the Handicapped to hold individual hearings specific to the Vocational Rehabilitation program and the Developmental Disabilities program.
- NARC supports the extension of the Education of the Handicapped Act, particularly Parts C and D.
- Special emphasis should be placed on in-service training of existing teaching personnel to appropriately educate severely and profoundly retarded students.
- Recent studies indicate that mentally retarded persons are unserved or underserved by vocational rehabilitation programs, sheltered workshops and work activity programs.
- Federal funds for activity programs for the severely handicapped are urgently needed.

Mr. Chairman, my name is James Chapman. I am the parent of a mentally retarded child and a member of the Board of Directors of the National Association for Retarded Citizens. Accompanying me today is Paul Marchand, Director of the Governmental Affairs office of the National Association for Retarded Citizens (NARC).

I wish to thank you and members of the Committee for allowing me this opportunity to speak before you on behalf of our country's six million mentally retarded citizens. As you well know, their needs are great. They require many supportive services for their lives to be meaningful. This morning, I would like to call to your attention three Federal programs which will require your consideration and support this year.

The first of these programs is the various parts of the Education of the Handicapped Act which expire this year. In addition to Part B, the State Formula Grant Program, these programs have been a major resource for improving educational programs for handicapped youngsters. The NARC would like to focus your attention on certain of these programs.

Early Childhood Education (Part C. Sec. 623)

The many programs funded under the Early Childhood Education Program have served as catalysts for the development of educational programs for young handicapped children. It was not too many years ago that local units of the National Association for Retarded

Citizens were operating many pre-school and school programs because the public schools did not provide these services. I am pleased to say that in many instances this is no longer the case. The passage of P.L. 94-142 and the continued success of the Early Childhood Education programs have proven to the states that handicapped youngsters can and must be educated. However, much still must be learned in order to develop appropriate programs for these children. The programs funded by this section of the Act have truly pioneered curriculum development, teaching methodology and other important components in the education of young children.

There remains a continuing need in this area, particularly in light of the pre-school incentive program in P.L. 94-142. NARC envisions these programs as complementary and supportive of each other. We request your continued support of the Early Childhood Education program.

Programs for the Severely Handicapped (Part C. Sections 621 and 624)

By far, the most neglected children in terms of education have been those with severe handicapping conditions. Thousands and thousands of severely and profoundly retarded children have been denied access to a public education. Again, we have great hopes that the implementation of P.L. 94-142 will solve this gross injustice. However, without the special projects for the severely handicapped in Part C, school systems will lack models from which to base their programs. So much needs to be learned in this area that every resource available must be utilized to the fullest.

Mr. Chairman, for these reasons, NARC urges the Committee to continue to support Part C of the Education of the Handicapped Act.

Personnel Training (Part D)

The continued preparation of trained personnel to meet the educational needs of handicapped students is a vital concern. This is particularly important as the education community prepares to serve a new population, the severely and profoundly mentally retarded student. In order to meet this challenge, many new teachers and support staff will need to be trained to meet the special needs of these children. Frankly, little is known on how to best educate this population. It is critical that institutions of higher education, special education agencies and others gear up to meet this new challenge.

The National Association for Retarded Citizens suggests that certain funds in this Part be set aside for the in-service training of currently available educators to prepare them immediately. Severely handicapped children cannot wait four or more years while new special education teachers are trained in colleges and universities. A ready pool of seasoned special educators is available for re-training. Funds from Part D should be made available on a high priority basis for this purpose. The NARC recommends the Committee support this effort.

Finally, Mr. Chairman, the National Association for Retarded Citizens wishes to generally support S. 725, your bill to extend most of the programs in the Education of the Handicapped Act. We urge your quick approval of this important legislation.

Our second program of concern is the Vocational Rehabilitation program. Recent studies have again highlighted the important role rehabilitation programs play or fail to play in the lives of mentally retarded persons. Both the Greenleigh Sheltered Workshop Study and the Urban Institute Comprehensive Needs Study point out major problems encountered by mentally retarded persons in seeking training and employment. Among these are:

. Mentally retarded persons comprise more than one-half of all persons employed in sheltered workshops;

. There are now almost 900 work activity centers (WAC) in the U.S.;

. Most WAC clients are mentally retarded;

. The average WAC wage is 36 cents per hour;

. The average annual WAC wage is $520 per year;

. Fewer than 10 percent of sheltered workshop clients are placed in jobs in industry;

. There is much evidence proving mentally retarded individuals are more vocationally capable, yet they are a minority of those served under the Vocational Rehabilitation Program.

These are just some of the conclusions of the studies. To list all of the recommendations would take all morning. Surely, you can see that mentally retarded persons are being terribly shortchanged in the rehabilitation process. Too many are still unserved. Most who are served are being underserved. Too many workshops and WACs are dead-end streets. These studies, which you requested, have been available for some time now.

The National Association for Retarded Citizens strongly urges this Committee to take an in-depth look at this situation.

There are still no substantial Federal funds to finance adult activity programs for those mentally retarded and otherwise handicapped individuals who, according to rehabilitation agencies, have no employment potential. Our society is relegating these unfortunate people to live wasted lives and, worse yet, to institutionalization. It is time the Congress comes to grips with this major problem. Our organization is prepared to discuss specific recommendations with you and your staff. I urge you to conduct hearings in the near future on the Rehabilitation Act and on the concerns of our nation's "unemployable adults."

NARC's third concern is the Developmental Disabilities program. Your committee was instrumental in making significant changes in the Developmental Disabilities Act in 1975. Most of these changes are nearing implementation. The Act expires next year. However, we must not wait until then to discuss the effectiveness of this program. We urge you to hold hearings specific to the DD program as soon as possible.

Question: Would you provide for the record additional recommendations for improving rehabilitation services to mentally retarded persons?

Recommendations:

(A) Require that State Vocational Rehabilitation Agencies utilize full 18-month extended evaluation prior to deciding employment potential and further rehabilitation training. Current practice usually has Vocational Rehabilitation Agencies terminating the evaluation process well before 4 - 6 months. This serves as a deterrent to mentally retarded clients who require additional training time.

(B) Foster closer cooperation between school systems and Vocational Rehabilitation agencies. Many mentally retarded students (14 - 20 years old) in the special education system undergo job training through work study programs. The school systems, however, cease to be responsible for the child once he/she turns 21 or is placed in a job. The V.R. agency should then take over for continuous follow-up, retraining and other such services.

(C) Many mentally retarded adults do not qualify for vocational rehabilitation services due to the severity of their retardation and/or secondary handicaps. It has been well documented that these individuals are capable of some limited work activities and can, in some cases, be trained to be high producers. The Rehabilitation Act should be amended to allow the Federal Government to finance long-term training and activity programs for such individuals.

STATEMENT

RESPECTFULLY SUBMITTED TO THE SUBCOMMITTEE
ON THE HANDICAPPED OF THE SENATE
COMMITTEE ON LABOR AND PUBLIC WELFARE

ON

THE NEED FOR INCREASED FEDERAL EFFORTS RELATED TO
EARLY EDUCATION OF DISABLED YOUNG CHILDREN,
AND FOR APPLIED TECHNOLOGY TO MEET INDIVIDUAL
NEEDS OF SEVERELY DISABLED ADULTS

ON BEHALF OF

UNITED CEREBRAL PALSY ASSOCIATIONS, INC.

The Chester Arthur Building
425 "Eye" Street, N.W., Suite 141
Washington, D. C. 20001

February 25, 1977

U.C.P.A. Governmental Activities Office Washington, D.C.

OUTLINE: UCPA SENATE SUBCOMMITTEE ON THE HANDICAPPED TESTIMONY

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1. Introduction

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UCPA WITNESSES

RONALD S. TORNER is executive director of Training Alternatives for Living and Learning (TALL), a rehabilitation technology project of UCPA of Greater Kansas City. Mr. Torner has held numerous professional positions with agencies serving persons with disabilities; among them teacher, rehabilitation counselor, sheltered workshop director, executive director of a work-oriented program for multiply-disabled adults, and field representative for the Accreditation Council for Services for Persons with Mental Retardation and Other Developmental Disabilities (ACS/MR&DD) of the Joint Commission on Accreditation of Hospitals (JCAH).

G. GORDON WILLIAMSON is a consultant in special education and occupational therapy to UCPA's Professional Services Program Department. Mr. Williamson has held several professional positions including teacher, occupational therapist, and university instructor and lecturer. In addition to teaching special education at UCPA of New York City, Mr. Williamson is a recipient of a training grant under P.L. 91-230 (Section 631) which supports his doctoral study at Columbia University in the education of the developmentally disabled.

Mr. Torner and Mr. Williamson are accompanied by E. Clarke Ross, Director, UCPA Governmental Activities Office, Washington, D. C.

TESTIMONY OF UNITED CEREBRAL PALSY ASSOCIATIONS, INCORPORATED: POINTS OF EMPHASIS FOR ORAL PRESENTATION

- Rehabilitation Technology Concerns (Ronald Torner)
    - Experience has demonstrated that the majority of persons with severe disabilities have received minimal service from State Vocational Rehabilitation agencies and private rehabilitation agencies as well. Vocational habilitation of persons with severe disabilities has a history dominated by an expectancy cycle that perpetuates low levels of success and low employment capabilities.
    - Many employment efforts for persons with severe disabilities have taken place in the context of simple, menial tasks that require little training, skill, or attention. In fact, most program descriptions that are available focus on tasks that are labor intensive rather than machine intensive, thereby accentuating the disabilities rather than the capabilities.
    - It is time to focus on a program concept of applied technology that is modified to meet individual needs of severely disabled adults. Emphasis on task analysis and performance analysis are essential. Technology must be applied to modify and adopt the work environment so that the physical demands placed upon an individual severely disabled now fall within the range of maximum potential, ie. trained physical capabilities.
    - The technology of habilitation could be greatly enhanced by combining research directly with service programs.
    - The TALL (Training Alternatives for Living and Learning) project of UCPA of Greater Kansas City operates on the premise of the necessity for complete partnership between business, industry, and the voluntary sector.

1) The TALL project team identifies potentially adaptable jobs, trains workers to maximum potential, and guarantees the worker's performance according to the employer's job requirements.

2) Business and industry steering committee representatives enable job analysis and engineering to take place, cooperate with sensitivity training efforts, and provide some benefits to the disabled worker.

Recommended Amendments to the "Rehabilitation Act of 1973"

- Section 101 (a)(5)(B) related to State Plans. Following "provide satisfactory assurances to the Secretary that the State has studied and considered a broad variety of means for providing services to individuals with the most severe handicaps;" add the phrase "including special attention to the feasibility of utilizing applied technology."
- Section 101 (a)(20) related to State Plans. Add a new subsection 20 that states "provide satisfactory assurances to the Secretary that the state has attempted, to the maximum extent possible, to utilize applied technology for persons with severe disabilities where appropriate."
- Section 102 (a)(11) related to Vocational Rehabilitation services which include telecommunications, sensory, and technological aids and devices; include specific report language in the next committee report accompanying amendments to the Rehabilitation Act discussing innovative uses of technology now being utilized.

- Section 202 (b)(1) and (2) related to Rehabilitation Research and Training Centers and Rehabilitation Engineering Research Centers. Add specific statutory language to both sections requiring systematic dissemination and utilization of information emerging from research undertaken in these centers.
- Section 203 (a) related to Training. Add specific statutory language that rehabilitation counselors must be facilitated in their efforts to meet the needs of persons with severe disabilities by a program of information dissemination and training in the area of applied rehabilitation technology.

Early Education Concerns (Gordon Williamson)

- Identification, evaluation, and placement of disabled young children remains inadequate. Few states have lowered entrance ages for public education programs to exceptional children under 3 to 5 years of age.
- The UCPA National Infant Collaborative Project has greatly enhanced our knowledge regarding early intervention and the delivery of services to the disabled young child. The benefits derived from the infant project related to public policy includes:
  1) Support provided the family enables the child to be maintained in the home.
  2) Positive influences of early intervention programs on the family occur.
  3) Children at all levels of functional ability show improvement on the average in all areas of development.

4) The medical-therapeutic, educational, and social-psychological components of service must be balanced and combined if families and their children are to receive needed support.

5) Regional and nationally based projects can play a unique role in fostering improved service delivery.

Needed Legislative Amendments Related to Early Education

- Section 623 of the Education for the Handicapped Act authorizing experimental preschool and early education programs for handicapped children must be extended. Continuation of federal support is essential for experimental programs on the local level as well as nationally-based demonstration projects. UCPA applauds the Senate Subcommittee on the Handicapped and its chairman, Senator Jennings Randolph for proposing such extension in S. 725.
- Consideration should be given to amending the "Education for All Handicapped Children Act" (P.L. 94-142; Section 611(a)(1)(A) and (5)(B)) lowering the specific age categories from 3 to 21 and 5 to 17 to 0 to 21.

Developmental Disabilities Act

- UCPA respectfully requests the Senate Subcommittee on the Handicapped to hold hearings this spring on issues related to continuation of the "Developmentally Disabled Assistance and Bill of Rights Act" (P.L. 94-103).

THE NEED FOR REHABILITATION TECHNOLOGY

I. INTRODUCTION

Experience has demonstrated that the majority of persons with severe disabilities have received minimal service from State Vocational Rehabilitation agencies and private rehabilitation agencies as well. Disability has too often been equated with lack of capability and the severely disabled person typically encounters more than average difficulty. Untested assumptions are evident, and stereotyping has hidden the characteristics and capabilities of the individual under the blanket of these assumptions.

For the person who is content with perpetuating levels of expectancy that are basically the ones handed down by their predecessors, or who believes that we have succeeded so long as the less severely disabled persons are kept busy in workshops, this testimony has no value. For the person, however, who believes that there is a substantial gap between how persons with severe disabilities function vocationally, at present, and how they could function, this testimony contains descriptions of what is being done and what could be done to completely revise what will be accepted as appropriate, successful, or even minimum performance from individuals with severe disabilities.

II. CONTRIBUTING PERSPECTIVES

Before exploring the possibilities for change, it is necessary to provide some perspectives.

A. Interpersonal Perspective

The grounding of human rights on a source outside society is aimed at making them secure. Although the motive behind this theory is readily understandable, the theory itself is less so. The existence of rights depends essentially on the mutual interchange of persons.

My rights are thus founded on your obligation to treat me as a person. The act, therefore, by which a person first of all acquires rights is not his creation as a person but rather his insertion as a person in a society of persons. This change of perspective has important consequences.

First of all, it highlights the essential tragedy of injustice. An injustice is not done by the mere fact that my reality as a person is ignored, or because something that belongs to me is taken away. Injustice is done only because you who are obliged to be responsive to me, refuse to do so.

This interpersonal theory also supplies a positive content that is often lacking. My obligation to be responsive to you includes more than the duty not to hurt you or to correct only the hurts I have caused. It also forbids me to be indifferent to you; forbids me to conduct myself in your presence as if you were not there; forbids me to pass you by as if you were some mere thing.

B. Social Perspective

Historically, people have always organized themselves to accommodate, change or eliminate other people who are sufficiently different to call unfavorable attention to themselves (Heiny, 1971). They are, in fact, oftentimes perceived as a surplus population without which society could easily function (Farber, 1968).

As a result, almost as a self-fulfilling prophecy, we hide our disabled people in institutions of one sort or another depending upon the severity and/or aesthetic nature of the disability. And this, in spite of the consideratble energy and money spent to keep these people in the status of tax users as opposed to tax payers.

How this country developed to its present level regarding expectancies for persons with severe disabilities is not appropriate to our testimony. Suffice it to say, that if the general principle instead is that all men are of equal worth, it will follow that the experiences of all citizens are important for the progress of society.

1. If all men are of equal worth, we can not isolate the handicap question from other social questions, and set these people aside as a special group of citizens.
2. If all men are of equal worth, we can not continue to relate a handicap to the individual himself, but must look upon the handicap as a relation between the individual and society.

In other words, if we are to make the necessary change and adaptations to bring about successful existence for "handicapped" people, it must be recognized that their behavior is more a function of the context in which they exist, than of their innate capabilities.

C. Legislative/Funding Perspective

Related to the influence of the interpersonal and social perspectives, there is the basic issue of legislation and funding with regard to persons with severe disabilities. The amount of national resources committed to these people, and the kinds of programs developed and funded, have oftentimes served to perpetuate existing practices and expectancies, and to resist change.

D. Programmatic Perspective

The vocational habilitation of persons with severe disabilities has a long history, a history of failure. It is a history dominated by an expectancy cycle that perpetuates low levels of success and low employment capabilities.

Virtually all that has been attempted has taken place in the context of simple, menial tasks that require little training, skill or attention. In fact, most program descriptions that are available focus on tasks that are labor intensive rather than machine intensive, thereby accentuating the disabilities rather than the capabilities. With very little data available where complex tasks were used, or where machine intensive tasks were used, an incomplete picture of the capabilities of people with severe disabilities is all that is available, at best.

A second significant set of variables conspicuous by their absence is definable training techniques. The lack of training techniques may seem surprising in view of the frequency with which the term appears. When the word training is used, it almost always refers to on-going activities and staff supervision of those activities, or, in more sophisticated programs, it refers to placing an individual on a job station where it is hoped that training will occur.

III. PRESENT STATE OF VOCATIONAL TRAINING

There is a developing shift of emphasis away from prediction and testing---a shift toward genuine training, under the assumption that potential competence is a given for all individuals. Changes are occurring across the entire range of activities embodied in the field of rehabilitation (Burke, 1971).

A. Service Programs

The only legitimate justification for a program is the reduction or elimination of a genuine difference between what someone can do and what he or someone else would like him to be able to do. Determining the true vocational capabilities of persons with severe disabilities and giving them the means for reaching those capabilities is providing an option previously not available.

Whether or not they will be able to exercise their newfound option remains to be seen.

1. Most school programs, for clients and professionals alike, still seem intent on organizational matters, with little evidence of the technology of training.

2. Most workshop programs still seem intent on contracts that require skills that the clients already have, rather than skills that must be taught.

3. Most vocational rehabilitation programs, public and private, still seem susceptible to criticism for excluding individuals, especially those who vary widely from the norm, who do not "fit their program."

B. Research

Comparatively little training research has been done, much less implemented. However, even the relatively small proportion of energy expended to date has resulted in a substantial body of information awaiting large scale dissemination and further development.

C. Legislation/Funding

There has been an emerging trend to break into the historic expectancy cycle.

1. The Rehabilitation Act of 1973 placing emphasis on "serving first those with the most severe handicaps, so that they may prepare for and engage in gainful employment:..." This was certainly a call for new and innovative methods of applying advanced technology to solve rehabilitation problems.

2. The Rehabilitation Act Amendments of 1974 clarifying the intent of Congress to be responsive to individuals who have substantial limitations in one or more major life activities. This was certainly a repeated insistence on innovative approaches to serving persons with severe disabilities.

IV. THE CHALLENGE

It is our position that certain changes would greatly enhance the chances for economic viability of persons with severe disabilities, and that the nation is fast developing a technology that will allow the achievement of this goal within the existing value structure of contemporary society.

The larger goal of complete assimilation into society will, however, be dependent upon the degree to which contemporary values are modified toward personal growth of all people rather than institutional efficiency.

A. Service Programs

It is time to focus on a program concept of applied technology that is modified to meet individual needs of severely disabled adults. It must be a concept that incorporates real training, real work and real pay.

True vocational training programs exist to help remove or reduce vocational handicaps of disabled people. They focus on results to be achieved rather than things to be done. Contracts and other work should be but vehicles and means to realize results rather than ends in themselves. Further, training efforts must also be focused on personal and skill development, rather than to solely work ethic considerations. If the field of rehabilitation is to proceed, a technology of habilitation, developed cooperatively by researchers and practitioners, must continue to emerge. Without a technology of how; what to train is rhetoric.

I would like to consider just two such "hows" for purposes of this discussion.

1. Task analysis: a precise delineation of what the competent person does or is supposed to do when he is doing a job.
    a. Content: breakdown of a task into trainable components---determined by the skills of the trainer and learner.
    b. Process: method of planned procedures toward the end result, in an effort to match existing technology and task characteristics.
2. Performance analysis: a critical determination of whether there is an important difference between what someone is already able to do and what it is intended for him to be able to do, and, if so, whether training or some other course of action is needed.
    a. Skill deficiency (does not know how)
        1. Change skill level---train him how.
        2. Change what is required of him---adapt job/skill requirements to meet the skills available.

b. Not a skill deficiency (could he do it if he had to)
    1. Change the conditions under which he is expected to do that which he already knows how to do.
    2. Change something about the world in which he does it so that doing it will be more attractive, or less repulsive or less difficult.

These two techniques alone mandate that the vocational rehabilitation process go beyond the traditional goal of achieving "maximum potential." It is not enough to train a person with severe disabilities to function at his maximum potential, when the exercise of this potential must take place in a world that is normed on an able-bodied population. Technology must be applied to modify and adapt the work environment so that the physical demands it makes on him now fall within the range of his maximum potential, i.e., his trained physical capabilities.

B. Applied Research

The technology of habilitation could be greatly enhanced by more of what Gold (1970) calls "middle-road researchers." Such researchers would carry out their research through direct involvement with service programs. Besides contributing to the solution of the problems of translation and implementation, it ensures evaluation by those for whom the research is designed to provide information.

Further, there must be emphasis on the dissemination of information emerging from research. Valuable information to demonstrate the capabilities of persons with severe disabilities to perform tasks or exhibit behaviors totally inconsistent with previous expectations, which has been available for years, has yet to find its way into practice in all but a comparatively few programs.

C. Legislation/Funding

The decade of the 70's has been described as the era of accountability. If the new concept of developmental disabilities is to be accepted and implemented, the services provided under the legislation must be effective in meeting the needs of disabled persons regardless of the severity of disability. Consequently, this subcommittee must continue to analyze the actual impact of dollars spent in terms of a cost-benefit analysis.

1. Encourage emphasis on applied research.
    a. Resources devoted to research must yield more return than if expended some other way.
    b. Research must be evaluated by those for whom the research is designed to provide information.
2. Encourage emphasis on a systematic utilization of information.
    a. Information must be widely disseminated.
    b. Relevant information from other disciplines must be identified and adapted.
    c. Comprehensive training effort must be established to ensure that technological advances are understood and put to use at the "grass roots" level.

3. Encourage resources for demonstration projects that are not only replicable, but also lead to more inventive advances. (Fortunately, someone back in the late 1800's saw the need not only for better horseshoes but for going beyond that to the automobile.)

D. Extension of Industry into Rehabilitation

1. Industrial Training

As used in industry, training usually refers to specific jobs (Ackerman, 1968). It means closing the gap between existing and desirable conditions (Prieve & Wentorf, 1970).

2. Industrial Engineering

Problems relating to production line efficiency and worker performance have long been the concern of industrial engineers. As the habilitation field develops, these concerns will become increasingly a part of the picture.

a. Methods - Time Measurement (MTM)

MTM is one of several predetermined motion-time systems. These systems are restricted to operations whose performance times are affected only by the workers. They are characterized by their ability to arrive at a work time standard in advance of the operation actually being performed (Rohmer, 1971).

While the use of predetermined motion-time systems is not universally accepted in industry, there are significant implications for using MTM in skill training and, perhaps, in research on all types of motor learning as well.

At the most practical level, the use of MTM in vocational training is good business. In one of the reported instances (Chione & Snyder, 1968) the gross income of the workshop doubled, as did the income of the clients. Within six months the figures had tripled. Chione and Snyder applied MTM methods to several aspects of the workshop operation, as did Torner a few years later:

1. to rearrange work stations and eliminate unnecessary steps;
2. to provide accurate data on which to base estimates of output rate, and consequently, more complete bidding;
3. to compare individual client performance with that of the average workers, using percentage ratings;
4. to provide an accurate means for paying commensurate wages;
5. to identify and eliminate those basic motions that a client could not perform;
6. to identify and modify the job to bring it within the range of the capabilities of the client.

b. Man-Job Match

Industry matches the job to the capacity of the worker far more commonly than is done in vocational training programs, although there have been more attempts lately to alter the job requirements to bring them within the range of capabilities of the worker (Asfahl, 1971; Wagner, 1971; Torner, personal experience).

This is not meant to understate the need to develop the total person through vocational training to allow the individual to make maximum use of his personal and skill capabilities, and thus, in a sense, changing him also. It just seems imperative to emphasize with Monge (1969) that job requirements are not immutable, that they can and should be changed, if appropriate. Further, as Howe (1965) points out, physical and mental disabilities should be considered as handicaps only as they serve to reduce prospects of employment. Through selective matching of individuals and jobs, most disabled individuals can find employment.

The RSA Rehabilitation Research and Training Center at George Washington University, Washington, D.C. has demonstrated that despite severe disabilities, a group of clients are competitively productive in fields such as computer programming, microfilming, statistical analysis, editing and proof reading. Successful placements are due in large measure to the utilization of the client/job matching process that reveals the environmental and physical deficiencies necessary for job performance. Then cost-effective modification of the environment is used to bring it within the realm of his physical capability.

E. Rehabilitation Industry

1. Centre Industries, Sydney, Australia

The experience in Australia has clearly demonstrated that industrial jobs can be held and performed by persons with severe physical disabilities. This organization has been successful in employing over 200 severely disabled cerebral palsied workers in jobs that they are not supposed to be able to function at successfully because they are too physically "handicapped." These "incapable" individuals constitute approximately one-third of the work force (Hume & McLeod, 1966). The success of Centre Industries can be attributed largely to the application of engineering techniques, especially using the MODAPTS system (Modular Arrangement of Predetermined Time Standards) to evaluate the physical capabilities of job hardware and methods to accommodate the individual's capabilities.

2. Marcron---A Program Related Investment (Gold and Torner, 1973)

A factory where 50 production employees, all moderately or severely retarded and some with additional disabilities, would do subcontract printed circuit board assembly. At the time, every similar attempt either utilized a supporting normal work force, utilized high level mildly disabled workers, was strongly subsidized, or all three.

In coming to the decision that the concept was a viable one, we took the following into consideration.

1. They have already demonstrated their ability to work essentially full work days (Gold, 1973; Wolfensberger, 1967; Hume & McLeod, 1966; Hume, 1971).
2. Their productivity can be influenced through money (Brown & Pearce, 1972; Schroeder, 1972; Torner, personal experience).
3. They can learn to do meaningful work and produce it reliably and consistently (Firth, 1965; Gold, 1973; Schroeder, 1972; Torner, personal experience).
4. They obviously enjoy and often prefer meaningful tasks over simple tasks (Gold and Torner, personal experience).
5. When they are doing meaningful work, most inappropriate behaviors go away spontaneously (Torner and Gold, personal experience).

A Program Related Investment (PRI) then, certainly seemed the way to go. Basing our understanding of PRI on the description presented in Foundation News (Rein, 1973), the concept related to Marcron. However, given the state of the economy, the state of the art passed us by. Even Marcron became an anachronism.

3. Center Industries Corporation (CIC), Wichita, Kansas
Center Industries, modeled after the Australian experience and aided by technical assistance from Wichita State University, is primarily a job shop operation providing support for local Wichita industry in the basic areas of fabrication, machining, and assembly. It employs the physically handicapped along side the able-bodied in a 75% handicapped to a 25% able-bodied ratio.

Wichita State University, College of Engineering, primarily through the efforts of members of the Industrial and Electrical Engineering Departments (Leslie, et al, 1973; 1974; 1976) developed diagnostic test procedures and testing hardware designed to determine the physical capabilities of severely physically disabled people.

A second stage of the Wichita State technical assistance has devoted its efforts to job modification based on a comparison of client capabilities and job requirements. As a result of this application of sound engineering principles to solve the demands of rehabilitation, severely disabled workers are generally meeting industrial norms and receiving unsubsidized wages, thus marking their new status as contributors to society.

The Rehabilitation Services Administration has designated Wichita State and Center Industries as one of the Rehabilitation Engineering Centers.

F. Extension of Rehabilitation Into Industry
TALL (Training Alternatives for Living and Learning) Project,
U.C.P.A. of Greater Kansas City, Kansas City, Missouri

Industry has long been interested in the handicapped, as indicated by the contributions of the Gilbreths (1953). In fact, perusal of industrial literature reveals a variety of articles, written by management for management, that specifically focuses on the handicapped (Petit, 1967; Monge, 1969; Loban, 1968; Carrington, 1970; Carrol & Pati, 1970). This literature, in spite of the fact that it clearly demonstrates an awareness and willingness to participate, does not seem to find its way into rehabilitation literature.

Professionals in the field of vocational rehabilitation, therefore, have been remiss in capitalizing on this receptivity. For years, with too awfully few exceptions, they have allowed themselves to operate with a self-imposed handicap, going cap in hand, quoting figures, citing articles, and using a social mode of expression, to solicit "contracts" on behalf of the "handicapped." Even in recent years, with the incorporation of engineering technology and client/job match, with all its attendant environmental modifications, business and industry are usually regarded as customers rather than partners.

This is where TALL becomes an innovation rather than a replication. Business and industrial representatives have been involved from the outset. Sample extracts:

> "Plans for utilizing modified machinery...were both exciting and impressive...we have, therefore, committed our firm to work with this group.... (It) is long overdue and much needed in the Kansas City area."
>
> "I would welcome an opportunity to serve in this program and do all the things necessary to insure its development."
>
> "I have committed our firm to work with this group and integrate persons with severe disabilities...the program is a much-needed, very worthwhile and long overdue exciting new project."

This innovation, perhaps more than any other, supports the promise of the project to achieve its goals. This Business/Industrial Advisory Team provides information on available jobs and job requirements. They also plan and manage the introduction of the project into local business and industry.

Great care was taken to simplify the organizational and mechanical details, thereby avoiding extra work or expense for the employer. The TALL team members identify potentially adaptable jobs, train the worker to maximum potential, integrate the worker, and guarantee the worker's performance according to the employer's job requirements.

Business/industry, in turn, enables the job analysis and engineering to take place, cooperates with sensitivity training efforts, and provides the same benefits to the disabled worker as to the able-bodied worker.

Cost of the project is, thus, handled externally. Overall initial funding has been derived from HEW's Region VII Office of Developmental Disabilities and Missouri's Office of Manpower Development (CETA).

V. CONCLUSION

The field of vocational rehabilitation, as it exists today in the United States, has been described. It exists within a context within which the population with whom it deals is perceived by almost everyone, even most vocational rehabilitation counselors, as being far less capable than has been demonstrated. The historic expectancy cycle, that has been recently shown to be unacceptable, is slow to change. But this is, indeed, changing as a result of legislative impetus and an emerging technology.

In studying the general literature of innovation, one view is that a nation's reward structure, set through conscious government policy, is a key factor in determining the type and amount of innovations that occur. With this in mind, the recommendations made throughout this testimony are here summarized with the intention of helping to stimulate further innovation and invention.

1. Rehabilitation Research must be an applied science in that its aim is either the application of a general theory to a specific practical problem, or the application of the

general tool of scientific method to solving a specific problem.

a. Research on evaluation must result in procedures that yield demonstrably useful information.

b. Rehabilitation research must be conducted in everyday experiences.

c. Information obtained from research must be widely disseminated.

2. Rehabilitation Programs must incorporate the technology available.

   a. Training objectives and training procedures must be clearly defined.

   b. Sound engineering principles (human factors and industrial) must be applied.

   c. Optimal man/job match efforts must continue to emerge.

   d. Cost-effective modification of the environment must be used.

3. Rehabilitation Technology must continue to be fostered.

4. Rehabilitation Counselors must be facilitated in their efforts to meet the needs of persons with severe disabilities by a program of information dissemination and training in the area of rehabilitation technology.

5. Rehabilitation Projects must be encouraged to enter a partnership with business and industry to better meet the pressing needs of vocational rehabilitation.

The basis for a technology is established. Resources are available and the field of vocational rehabilitation is ready for the changes that must ensue if it is to meet its responsibility to those in its charge.

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THE IMPORTANCE OF EARLY EDUCATION EFFORTS

I. INTRODUCTION

Despite the notable expansion of special services in the last decade, the identification, evaluation, and placement of disabled young children remains inadequate. Few states have lowered entrance ages for public education programs to exceptional children under 3 to 5 years of age. Even in those states with such a mandate, funds are frequently not allocated for this purpose and preschool and infant centers are limited. Continuation of federal support is essential for experimental programs on the local level as well as nationally-based demonstration projects until state health and education agencies can assume the responsibility.

II. LESSONS LEARNED FROM SERVING YOUNG DISABLED CHILDREN

The National Infant Collaborative Project is coordinated by United Cerebral Palsy Associations, Inc. This Project and other special programs funded by the Bureau of Education for the Handicapped have greatly enhanced our knowledge regarding early intervention and the delivery of services to this population. There have been two key components to the Collaborative Project. The first has been the effort to identify and detail the exemplary aspects of programs for atypical infants and their families. The second focus has involved providing assistance to ongoing or new infant programs to enable them to replicate these exemplary elements.

Fifty-four centers have participated in the Project providing services to approximately 4000 families over the last six years. These infant centers are located throughout the country and represent a wide variety of funding and administrative patterns. For example, there are programs which serve predominately rural, urban or special ethnic populations, some are tax-supported services of state or local governments, while others are operated by private health or voluntary agencies. The young children tend to be moderately to severely disabled with varying handicapping conditions such as Downs Syndrome, cerebral palsy, visual and hearing impairments, and general developmental delay. Some of the major experiences of the Collaborative Project have particular relevance for public policy. These points evolve from numerous sources within the Project--the extensive collection of data describing developmental, demographic and medical characteristics of the dhildren, in-depth longitudinal interviews with a representative sample of the parents, and information shared by the center staffs through field visits, conferences, and questionnaires.

One of the great benefits of early intervention programs is the support provided the family to enable them to maintain their child in the home. This seems not only the best alternative psychologically for most families but also results in a savings of resources for the entire community. It is apparent from the interviews that the vast majority of the parents feel themselves capable of managing their child at home for the forseeable future.

The parents report large improvements in the child's manageability after they became involved in a developmental program. A major study in 1964 found that one-half of the placements in residential facilities for the retarded were initiated because the parents experienced management problems with their child. So it is of considerable importance that parents feel confident and able to care for the special needs of their child. After learning adapted techniques for feeding her physically handicapped baby, one mother changed a frustrating 2½ hour meal time to a pleasureable 30 minutes.

As many as half of the parents in an initial interview cited some concern about their disabled child as the most serious problem currently faced by their family. In contrast, two years later on a follow-up interview only 16% of the families still expressed that feeling. The same change is reflected in the fact that 63% of the families reported on the second interviews that there had been a significant decrease over the previous two years in the emotional pain and turmoil they felt in relationship to their disabled child. It appears as if the problems in raising their child, while not necessarily diminishing, have at least been put into a broader perspective and no longer so dominate the family's conception of itself. One parent stated that he was "more than the father of a cerebral palsied child." He was also "a husband, a mechanic, a baseball player, and a neighbor."

When asked what aspect of the program was most helpful, over half the parents mentioned a direct service to themselves instead of the child. These responses were divided about equally between the educational aspect of the parent program and the emotional and supportive part. There is no doubt that giving parents information, positive actions to take to assist their baby's development, and the chance to talk about their feelings adds immensely to their feelings of competence and comfort. Parents report that feelings of helplessness and not knowing what to do, along with the isolation and alienation from others, are the hardest part of being a parent of a disabled child.

This point underscores the significance of active involvement of the family in the planning and actual implementation of habilitative services for the infant. The interviews suggest that through participation in the developmental programs, the parents have become more skilled in their dealings with the service delivery system. Almost one-third (30%) of the parents were involved in an advocacy group for the disabled. And all but 14% of the parents when asked whether they would be able to get services improved or expanded if it became necessary felt as if they would have some strategy that they could use to have an influence on the decisions made about the delivery of services.

The positive influence of early intervention programs on the family should be stressed. It is important not to get channeled into assessing the value of such programs purely on the basis of their ability to raise developmental quotients of the children. Certainly there is evidence to indicate the beneficial effects for the infant. Children at all levels of functional ability in the Collaborative Project show improvement on the average in all areas of development. Even the most severely involved of the cerebral palsied children make significant developmental gains. One must keep in mind, however, that these programs are multi-faceted and have goals and interventions with a pervasive impact on the child, family, and community.

Another determination of the Collaborative Project involves the composition, roles and functions of the professional staffs of developmental centers. It is UCPA's experience that any service program for the developmentally disabled young child and family should include components from the medical-therapeutic, the educational, and the social-psychological specialities. The professionals from these three areas must respect each other's contribution and work cooperatively with the parents. This is best conducted in a transdisciplinary environment in which individual team members share their skills with one another so that any one member of the team may serve as the primary contact with a child and his family. This model avoids excessive handling of the baby by too many adults.

A prominent change in the centers participating in the Project was to alter staffing patterns to provide balanced input from the various disciplines. To achieve a balance of program components, all the disciplines need to be represented by high quality staff persons with influence in the shaping of the program content. This is particularly necessary when dealing with a young multiply handicapped population which presents such complex and diverse needs.

The Collaborative Project has also demonstrated the unique role that a regional or nationally-based project can offer. Endeavors of this scope can examine health and educational issues from a comprehensive outlook and can facilitate planning and exchange between many levels of operation. For example, the Collaborative Project has provided numerous kinds of technical assistance to the 54 centers across the country. This aid has included (1) expert consultants visiting each center to help the staff analyze potential ways to improve the program, (2) training conferences for complete teams from various centers, and (3) a visit by staff members of each center to another developmental program for infants. The sharing of ideas and experiences with colleagues from another geographical area is most productive.

As a partial result of these efforts, the centers report more structured and extensive curricula including individual program plans for each child, new assessment tools, the addition of materials and adapted equipment, expanded contact with community agencies, and other indications of improved quality of service.

During the final two years, dissemination and replication have received an even greater emphasis. Over 17 conferences on programming for atypical infants and their families will be given in every region of the country before the Project's termination. The majority of these are cosponsored with local public and private agencies. A collection of printed, audio and filmed material has also been developed. Additionally, experimental models for program replication are being tried. An illustration is a mutual effort by centers in the 6 states of New England to share expertise and resources. A similar cluster of cooperating programs is located in the San Francisco Bay area. Thus the impact and influence of a major demonstration project continues long after the project itself is completed.

In summary, exemplary work has been accomplished in meeting the demands for service by families with atypical infants and toddlers. Federal assistance through experimental demonstration projects in early intervention has been an instrumental factor in this progress. However our commitment to a continuum of educational services for the disabled is relatively new. Sustained congressional leadership is critically required.

SUPPLEMENTAL MATERIAL

SUBMITTED AT THE REQUEST OF THE
SENATE SUBCOMMITTEE ON THE HANDICAPPED,
COMMITTEE ON HUMAN RESOURCES

ON

QUESTIONS RELATING TO EARLY EDUCATION
OF DISABLED YOUNG CHILDREN AND
UTILIZATION OF REHABILITATION TECHNOLOGY

ON BEHALF OF
UNITED CEREBRAL PALSY ASSOCIATIONS, INC.
THE CHESTER ARTHUR BUILDING
425 "Eye" STREET N.W., SUITE 141
WASHINGTON, D.C. 20001

MARCH 1977

U C P A Governmental Activities Office   Washington, D.C

Describe more fully United Cerebral Palsy's role in the National Infant Collaborative Project.

United Cerebral Palsy Associations, Inc. (UCPA) has been responsible for the development and implementation of the Collaborative Project. Una Haynes has served throughout as project director. The bulk of the funding for the Project has been provided by the Bureau for the Education of the Handicapped (BEH), Office of Education. Additional support has come from the United Cerebral Palsy Research and Education Foundation (see table on Total Funds Expended). A detailed accounting of the demonstration part of the Collaborative Project is contained in The First Three Years available through the national office of UCPA.

The 54 cooperating centers are associated with numerous public and private agencies and are not limited to affiliates of UCPA. Some developmental programs are linked to universities (e.g., Ohio State University, University of North Carolina, University of Hawaii); some programs are part of voluntary health agencies (e.g., San Diego County Association for the Retarded, affiliates of the Easter Seal Society); and others are sponsored by governmental agencies (e.g., Ellisville State School in Mississippi, Stockton Unified School District in California).

The activities of the Collaborative Project serve as a catalyst to educate local communities in the need for early intervention and to strengthen programs for families with atypical infants and toddlers. The Project has been able to rally local support for ongoing comprehensive services for this disabled population. Local public and private expenditures for developmental programs have been five times greater than the amount expended by the Project. In other words, the total grant expenditure of approximately $2 million has functioned as seed money to generate over $10 million from local sources for direct service. This 5 to 1 ratio suggests that federal involvement through demonstration projects and technical assistance is successful in stimulating local institutions to allocate resources for early intervention.

TOTAL FUNDS EXPENDED
NATIONAL INFANT COLLABORATIVE PROJECT

		Government Share	UCPA	Total
Project 7 (Demonstration)				
Year Ended	6/30/72	85,250.00	27,308.40	112,558.40
	6/30/73	238,541.97	109,986.48	348,528.45
15 Mos.	6/30/74	417,458.03	99,086.10	516,544.13
		741,250.00	236,380.98	977,630.98
Project 9 (Outreach)				
Year Ended	6/30/75	400,132.92	84,721.37	484,854.29
	6/30/76	269,917.08	59,347.56	329,264.64
		670,050.00	144,068.93	814,118.93
Grant	1976/77	200,000.00	41,163.60	241,163.60
Total Expenditure		1,611,300.00	421,613.51	2,032,913.51

What is the age range of children served in the National Infant Collaborative Project?

The centers participating in the Collaborative Project provide services for atypical children from birth to three years of age. If special services are still required by the child and family after age three, referrals are made to appropriate programs within the same center or to another community agency.

Based on a sample of 1477 families, about 40% of the exceptional children enter programs before they are one year of age, and 60% by 18 months of age. As expected, the more severely involved children and those with readily identifiable handicapping conditions reach infant programs at an earlier age. An obvious instance is with Downs syndrome where 35% of these children enter a program by six months of age.

Does the National Infant Collaborative Project include outreach programs for rural areas?

The Collaborative Project has developed several models for serving families in rural areas. One model is exemplified by the programs at the University of Iowa Medical Center in Iowa City and the Crippled Children's Hospital at Sioux Falls, South Dakota. These programs are structured to serve families from all over the state. They bring the parents (or primary caregiver) and baby to the center for a stay of two or three days. During this time the child is evaluated by medical-therapeutic, psychosocial, and educational disciplines, an individualized home management plan is devised, and the parents are counseled. After this intensive work-up, the family is visited periodically by a professional team. The disciplines represented by the team depend on the varied needs of the child and family. Some of the functions of the team include answering parental questions, reevaluating the child and updating the home program, and mobilizing whatever local resources that may be available to assist the family.

Another model for rural service is demonstrated by an unusual joint effort in Mississippi. Two agencies--Ellisville State School in Ellisville and the Crippled Children's Service in Jackson--share staff to support a "baby unit" to serve the 90 mile area between the two sites. This is a very rural area with many minority group, medically indigent families. Through early case finding and direct service, it is hoped that the need for institutionalization can be prevented.

The Collaborative Project is also active in training professional personnel to work with the young disabled population. Conferences are being held on creating individual program plans for handicapped babies. The Project developed the basic textbook that is used in the workshops--Program Guide for Infants and Toddlers with Neuromotor and Other Developmental Disabilities. Some conferences are intentionally conducted in locations that draw professionals and participating families from rural areas. A few examples include conferences located near Albuquerque, New Mexico, Bakersfield, California, Lakeland, Florida, and the planned workshop in Ellsworth, Maine.

Would you provide us with a detailed report of the progress to date on your National Infant Collaborative Project.

The Project Report for the demonstration phase of the grant (July 1971 - July 1974) is attached. During this period 11 demonstrated models of service delivery were developed for infants with central nervous system deficits. The outreach phase (1974 - 1977) has focused on replication and dissemination. A comprehensive table is included of target populations receiving services over the six year period. The list covers activities of the Project directed toward children, parents, inservice center staffs, professionals in the field of early intervention, and general conferences and meetings.

Many community planning bodies were ready and waiting for the opportunity to replicate one or more of the Project's demonstrated models when the emphasis was shifted to outreach in FY 1975 - 1976. The Project evolved three technical assistance and staff development systems to foster the replication of service models. Some were geared for use with and by agencies providing a single component of service, such as early childhood education, that wanted to be better able to serve infants with multiple disorders of organic origin. Other agencies had diagnostic, therapeutic, or psychosocial service in place but wanted to strengthen family focused services or special education. Some communities needed to start from scratch; while others needed to forge new and stronger interagency coalitions. Before the end of FY 1975 - 1976, these technical assistance and staff development systems had been deployed on behalf of a total of 54 agencies.

Project materials evolved during this outreach period are becoming available for dissemination. Some of the staff training components are now available as ongoing offerings by universities, some being short courses conducted on campus and others as correspondence courses. All offer continuing education credits. One or more of the technical assistance models and other staff development components continue to be offered on a shared cost basis, negotiated with applicant agencies or community planning bodies.

Attached is a compendium of audiovisual, printed materials, and resources available from or recommended by the Collaborative Project. Many of the products have been developed by the Project. Some of these products include the following:

Cognitive, Social, Psychological and Language Development--An audiotape series of 15 lectures on normal and abnormal development.

Parents Are Teachers Too--A slide/tape module on principles and techniques of teaching adults as well as children.

Staff Development Handbook: A Resource for the Transdisciplinary Process.

Programming for Atypical Infants and Their Families--Two monographs compiling a variety of original, relevant articles such as "Starting an Infant Development Program," "Parent Groups," "Siblings of the Disabled," and "Grieving Process of Parents."

Also enclosed is the most recent progress report for the outreach period (Program Performance Report - FY 1975-76.)

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Question:

Could you speak to the need for an appropriate balance between sheltered workshop placement and competitive employment placement given your earlier statements on utilization of rehabilitation technology?

Answer:

Employability refers to the capacity of the individual to prepare for, enter into, and progress within occupations in which he can find economic and personal satisfaction.

In making placement decisions, therefore, we must first focus on the meaning of work to the individual client.

First, the individual must have some motivation to work.

Second, he must be ready to utilize a program of training.

Secondly, insofar as the core to being a worker in the manner in which an individual can assume the role of a productive person, we must focus on the productive role.

First, it appears to be the outcome of a period of personal development.

Second, people vary greatly in the ease and efficiency with which they can assume the role of a productive person, and some have difficulty assuming this role at all.

Third, the requirement to be productive is clearly related to certain prevailing cultural values.

Fourth, a person must be able to cope with a wide array of specialized social conditions.

Fifth, the ability to be productive is a function not only of the kind of person one happens to be, but also of the kind of work one is required to perform.

It appears, then, that work experience and personal development training can be made available in a sheltered setting to those whose prospects for competitive employment are presently very limited due to the difficulty they are experiencing in assuming the productive role. But for those who can learn and utilize the requisite social and work skills needed to function effectively in the labor market, the program should be competitive employment. In short, there are two distinct groups of clients (sufficiently flexible as to permit ready mobility from one to the other), each with differing needs: one for personal development training and one for competitive employment training. It is time to incorporate and act on this distinction with a cost-effective system that will effectively provide services for each.

DEMONSTRATION PERIOD

	No. Children Screened	No. Children Provided w/ Direct Service	No. Children Needing & Provided w/ Medical, Therapy, Special Psychological, or other Required Supplemental Service	No. Parents Served	No. Staff Provided w/In-Svce Trg. by the Proj.	No.Hrs. of In-Svce Education	Trg. Others (Teachers, Therapists, Soc. Wkrs., Psychologist etc.) No. People		Outreach, C ferences, N Professional Assoc. Mtgs, etc. No. of Peopl
71/72	305	277	699**	455	52	3952	148		455
72/73	1311	857	1066**	1124	122	3660	1881		1124
73/74	821	993	2338**	1318	515	15450	2062		1318
TOTAL			4103**	2897	689	23062			
			OUTREACH YEARS						
							No.	Hrs.	
74/75	1957(Est)*	2000+ * (est)							3130
75/76	4323	2088+*(est)					620	11;340	5515
76/77 (current year)	Not yet tallied						721 (To date	17,304***	
SUB TOTAL (To Date)	8717	6215					432	28,644	11,542

* Based on reports from 30 of the project centers

** When more than one supplemental service is provided, a child is separately listed in each service

*** There are several more workshops scheduled

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PROJECT REPORT

July 1971 - July 1974

A NATIONALLY ORGANIZED COLLABORATIVE PROJECT TO PROVIDE COMPREHENSIVE SERVICES TO ATYPICAL INFANTS AND THEIR FAMILIES

Supported in part by Grant No. 0-714492(616)
USOE (Bureau of Education for the Handicapped)

United Cerebral Palsy Associations, Inc.
66 East 34th Street
New York, N. Y. 10016

(12)

A NATIONALLY ORGANIZED COLLABORATIVE PROJECT TO PROVIDE COMPREHENSIVE SERVICES FOR ATYPICAL INFANTS AND THEIR FAMILIES

PROGRAM PERFORMANCE REPORT

FOR

HANDICAPPED CHILDREN'S EARLY EDUCATION PROGRAM

Grant No. OEG-0-74-1443

FY 1975-76

United Cerebral Palsy Associations, Inc.
66 East 34th Street
New York, New York 10016

(13)

COMPENDIUM OF INFORMATION, AUDIOVISUALS AND PRINTED MATERIALS; PLUS RESOURCES

Available from or Recommended by the

UNITED CEREBRAL PALSY
NATIONALLY ORGANIZED COLLABORATIVE PROJECT
TO PROVIDE COMPREHENSIVE SERVICES FOR
ATYPICAL INFANTS AND THEIR FAMILIES

BEH OEG-0-74-1443

NOTE: Please address all correspondence to the attention of the National Collaborative (Infant) Project.

UNITED CEREBRAL PALSY ASSOCIATIONS, INC.
66 East 34th street
New York, New York 10016

Revised
December 1976

The American
Occupational Therapy Association, Inc.

March 4, 1977

MAR 10 1977

Honorable Jennings Randolph
Chairman, Subcommittee on the Handicapped
Committee on Human Resources
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

The American Occupational Therapy Association notes with interest the subcommittee's oversight hearings on rehabilitation programs and the needs of handicapped children.

The attached statement has been prepared to inform the subcommittee of problems which frequently come to the attention of occupational therapy practitioners.

I request that this statement be made part of the hearing record, and I offer whatever assistance we can provide you in the future.

Sincerely,

James J. Garibaldi
Executive Director

JJG:RLW:met
Attachment

The American
Occupational Therapy Association, Inc.

Statement of the American Occupational Therapy Association on Programs for the Handicapped*

Mr. Chairman and members of the subcommittee:

The American Occupational Therapy Association is pleased to submit this statement as the subcommittee examines programs for handicapped individuals.

For 60 years this Association has represented independent health professionals who specialize in alleviating the suffering and increasing the independence and productivity of the aged, the physically or mentally disabled, and the economically or culturally disadvantaged.

Occupational therapy practitioners are trained in curricula involving developmental psychology, anatomy, neurophysiology, and the social sciences. This training is followed by field work experience in areas such as psychiatry, rehabilitation, developmental disabilities, and gerontology.

Occupational therapists are among the few non-physician mental health professionals who are trained in the medical and biological sciences. They provide services in general and psychiatric hospitals, nursing homes and tuberculosis sanitoria, community mental health and mental retardation centers, rehabilitation agencies and home health settings, and public and private school systems.

The Association and the 23,000 members which it represents therefore have a great interest in the subcommittee's activities.

We would like to share with you some of the problems that occupational therapists and their clients have observed in various Federal programs for the handicapped.

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*A statement submitted to the Subcommittee on the Handicapped of the Committee on Human Resources, United States Senate, Washington, D.C. 20510, March 1977.

I. Medicare Coverage

Two significant shortcomings in the Medicare law seriously affect handicapped individuals who qualify as Medicare beneficiaries. Both shortcomings relate to reimbursement for occupational-therapy services.

Although occupational therapy is a covered outpatient service if provided in an outpatient clinic attached to an approved hospital, there is no coverage if the same service is rendered in approved freestanding clinics or otherwise organized health treatment settings. This arbitrary restriction on occupational therapy coverage reduces the availability of an important rehabilitation service, contributes to the prolongation of an individual's rehabilitation process, and increases the probability of longer and more costly institutional stays. Other rehabilitation services, such as physical therapy and speech pathology and audiology, are correctly included in all outpatient coverage. It is imperative, therefore, that the limitation on outpatient occupational therapy services be removed, if the needs of disabled Medicare beneficiaries are to be met in any comprehensive manner.

The second restriction on occupational therapy services occurs in the home health area. Here a patient must require intermittent skilled nursing, physical therapy, or speech pathology or audiology before reimbursement for occupational therapy can be provided. This restriction also increases the likelihood of increased institutionalization. It further occasions the prescription of prerequisite services when occupational therapy alone would suffice. Most importantly, however, it frequently denies needed services to persons who are too poor to pay for them. Many times these persons are among the estimated 2.3 million noninstitutionalized elderly who cannot function adequately because of disease and disability. Medicare coverage for occupational therapy as a sole service in the home health setting would contribute substantially to improving the health care of older and disabled citizens.

In addition, the Medicare reimbursement for equipment is not consistent with the rehabilitative ideal. For example, Medicare will reimburse for such ambulatory aids as walkers, but will not reimburse for basic adaptive equipment such as raised toilet seats. While these seats are considered "comfort items" from the standpoint of the SSA, they are more than mere "comfort items" to individuals disabled by arthritis.

II. Proper Placement in Rehabilitation Programs.

A client's rehabilitation is determined in large part by the adequacy of the client's rehabilitation program. Placement in an appropriate program is essential. Such placement increases an individual's chances to achieve a more "normal" lifestyle, and it suggests greater economic efficiency, as well.

The Association notes that some private insurance companies have successfully used rehabilitation specialists to help place beneficiaries in the most appropriate and effective treatment programs possible.

III. Maximum Utilization of Rehabilitation Programs.

Reimbursement under the current rehabilitation system is based upon head counts. These counts represent the number of cases which have been completed or "closed" by rehabilitation counselors. Reimbursement is determined by the number of closures. This places pressure on rehabilitation agencies to produce as many closures as possible. This system acts as an incentive to deal with the easier cases (such as provision of dentures) and as a disincentive to grapple with the more difficult cases (such as vocational placement for quadriplegics).

It is the Association's understanding that the possibility of using a point system in lieu of a head-count system has long been considered and discussed. Such a point system would be weighted to correlate with the client's disability. Provision of dentures, for example, might be assigned one point; locating appropriate employment for a paraplegic might be assigned ten points. A properly weighted system could encourage vocational rehabilitation counselors and agencies to spend more time with the severely disabled.

The Association urges the Committee to consider the use of a weighted point system, which could be developed and implemented with existing mechanisms.

IV. Adequacy of Rehabilitation Programs.

In spite of the plethora of Federal programs for the handicapped, there remain many handicapped individuals who are not benefitting from them. For example, a child with a "low-normal" IQ of 85 is too intelligent to benefit from special education programs. This same child is also destined to fail in a "normal" academic classroom. In those communities where vocational education programs are not offered as an alternative, these children are likely to drop out of school with neither academic nor employment skills. The availability of vocational education programs for these children could rescue them from a system based upon academic failure to one based upon personal achievement.

Another group of individuals who are too often overlooked by traditional vocational programs are handicapped adolescents. Young people with congenital deformities should receive guidance or assistance before they reach 16 years of age, the threshold age for vocational rehabilitation assistance.

The Association recommends that the Congress mandate greater communication and coordination between the many Federal programs. This could prevent the tragedy of a child falling through the cracks between the vocational rehabilitation laws and the laws requiring an appropriate education for all handicapped children.

V. Employment and Discrimination.

There are many Federal laws which have a major impact upon employment of the handicapped. These include the Occupational Safety and Health Act, the Health Professions Educational Assistance Act (occupational health training centers), the Social Security Act, and the Rehabilitation Act (especially sections 503 and 504.)

The Association believes that there must be greater coordination between the Department of Labor and the Department of Health, Education and Welfare to assure that handicapped individuals have access to meaningful employment opportunities and that the environments in which they work will be appropriate and safe.

VI. Incentive Programs.

The state of Michigan has adopted a law to encourage middle-income individuals to adopt children with a pre-existing handicap. Under this statute, these children are automatically eligible for crippled children's services without regard to the adoptive parent's income. The Association urges the Congress to provide incentives for other states to adopt this forward-looking approach.

The Association also recommends that economic incentives be utilized to encourage industry to design equipment (such as rest room facilities) which can be modified easily to accommodate the needs of the handicapped.

The American Occupational Therapy Association appreciates this opportunity to provide this information to the subcommittee, and will be pleased to provide further assistance.

SCOUTING/USA

A program for Cub Scouts, Scouts, and Explorers

Washington Bureau
Boy Scouts of America

888 17th Street, NW., Suite 218
Washington, D.C. 20006
Telephone: 202 785-5100

March 28, 1977

Hon. Jennings Randolph
Chairman, Subcommittee on Handicapped
Senate Human Resources Committee
5121 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Randolph:

Noting that the subcommittee you chair will be conducting hearings on "all education for handicapped programs as well as other programs to assist handicapped people", we are submitting herewith for your information an article describing ongoing work in the Boy Scouts of America with the handicapped.

This enclosure is from Scouting magazine, March-April 1977 edition, and is merely submitted for your information. Should the subcommittee desire more information on Scouting's program with the handicapped, we would be happy to supply it.

Sincerely,

Marshall Monroe

MM:jam
Enc.
cc: Arabella Martinez, Assistant Secretary for Human Development
Department of Health, Education and Welfare

BEACON FOR THE HANDICAPPED

BY CHARLES E. ANDERSON

Wheelchairs, crutches, leg braces and other rehabilitative gear are all visible and commonly known bars that form prisons for millions of Americans who are labeled "the handicapped." But beyond these symbols of pain and suffering lurks a more grueling world, marked by humiliation, despondency and insecurity that are often companion to being cut off from the mainstream of society.

Many handicapped persons have broken free of these prisons to lead successful, productive and rewarding professional and social lives. Some of those who have done so, credit Scouting with instilling in them the faith and persistence necessary to master life in a world designed for the whole and healthy.

One such person is the Honorable Judge Nathaniel Sorkin, who at age three was stricken with polio. A few years later he found in Scouting a strength he needed to move on to an illustrious career in law and politics and to take on demanding civic responsibilities.

After more than 20 years on the bench, Judge Sorkin is still active in Scouting, presently as the volunteer chairman of the Advisory Committee on Scouting for the Handicapped, a group of distinguished citizens that serve both the Boy Scout and Girl Scout councils of Greater New York. Made up of specialists in education, sociology, medicine and recreation, the committee guides the councils to broaden the participation of handicapped people in Scouting activities.

"We believe," says Judge Sorkin, who also works with several law Explorer posts sponsored by the Civil Court of New York City, "that the handicapped child is more like other children than different from them, and that wherever possible, there should be a thorough integration of the handicapped with other students."

This kind of talk by the judge is not public relations rhetoric. It is the kind of integration into the normal, everyday American life mainstream that Judge Sorkin has always worked for in Scouting and outside of it.

In Judge Sorkin's scrapbook at his court chambers is a card showing him to be a member of Troop 712 in New York's Upper West Side. It is signed by the first Chief Scout Executive, James E. West, who was himself crippled in childhood and used a cane for support for the rest of his life.

"I couldn't take the First Class test," Judge Sorkin recalls, "but I wanted to be such a Scout. So I was designated an Achievement Scout. The regular requirements, such as the 14-mile hike, were waived in favor of my building a number of birdhouses that were later placed in New York's Central Park."

The judge remembers how, after his admission to the troop, he was never made to feel less than a part of it. He particularly recalls the time when his troop's meeting place was changed from near the place where he lived to several blocks away from home.

"Knowing that I was unable to walk that distance, the members of my troop constructed a clapboard wagon and pushed me on it to every meeting. My task was to hold a flashlight capped with red cellophane paper to signal automobile traffic whenever we were on the street."

Once the entourage arrived at the meeting, Judge Sorkin said, "I was just like another one of the boys. When they went to play stickball, I was with them as an umpire. In this way Scouting became a very important aspect of my life. I was a part of and not apart from the rest of my peers."

To this day, Judge Sorkin remains in close contact with two friends he met in his troop: Herbert K. Lippman, an attorney, and Martin Messinger, a retired State employee.

One of his memorable days in Scouting came shortly after his induction into the troop. In the 1924 New York City Boys' Day Parade, he stood in Scout uniform on the reviewing stand as an honor guard along with the "boy mayor," beside New York City Mayor John F. Hylan. That meeting with the mayor turned out to be prophetic: during his adult life Nathaniel Sorkin would serve a succession of New York City mayors as an outstanding civil servant.

If Judge Sorkin found companionship in Scouting, that quality

(continued on page 49)

New York Civil Court Judge Nathaniel Sorkin (above, left) chats with his old friend, New York Mayor Abraham Beame. At right, the judge and his judicial assistant, Gwyland Winslow, point out the various courthouses in lower Manhattan's Federal Square. Listening attentively are Scouts Chun Ki Fong, in the wheelchair, and (l to r.) Herman Farreil and Jose Salcina. "As a Scout," the judge says, "I had a chance to pal with other boys, to learn skills, and to get the encouragement to believe in myself and my own potential." Since those days, Judge Sorkin, an ardent Scouter, has given hundreds of youngsters a renewed belief in themselves.

absent in his dealings with society. His youth was spent a time when many people were ensitive to the needs of the handicapped, or worse yet, gave little more than degrading pity to their needs.

Once, at age 11, while walking on his crutches along Broadway, he was stopped by two old ladies who offered him a donation. "Oh, you poor boy, let me help you," the judge remembers one of them saying. He looked her squarely in the eye and replied, "Thank you very much, ma'am, but you may need the money more than I do."

The judge now feels that being tutored at home during his early years and being assigned to a special ungraded class for the handicapped through grammar school left much to be desired.

"In that kind of situation, a person is prevented from feeling like a normal person," he said. "It's a world in which you're constantly led to believe that 'you can't,' when deep in your heart you know you can.

"In Scouting," the judge continued, "I had a chance to pal with other boys, to learn skills, to get the satisfaction of accomplishment and the encouragement to believe in myself and my own potential."

Judge Sorkin credits Scouting with giving him the confidence and courage to insist that he travel to and from school during his high school days on public transportation. That venture, the judge feels, gave him the sense of participation he needed to become one of George Washington High School's most outstanding students. It was then that people began to treat him as he had always wanted to be treated.

"From the time I got to high school, I never felt I was handicapped," Judge Sorkin recalls fondly. "I knew that I was limited, but I never gave anyone reason to say, 'He can't do this or that because he's limited.' If they had been able to say that, *I would have been handicapped*. A person does not become handicapped until someone else sees him as handicapped."

With that attitude, he joined with the school's swim team. "I couldn't be a championship swimmer," he said, "but I was manager of the team. I couldn't dance, but as student manager of extracurricular activities, I organized and managed a great many of them." In his senior year, hobbling along on crutches didn't prevent him from gaining the honor of being elected student body president.

It was that same kind of energetic thrust into life that marked Judge Sorkin's four-year career at St. John's University in New York, to which, while still on crutches, he commuted daily by subway.

When he was graduated from law school in 1935, New York newspapers reported that he completed his course of study in less than three years, was class valedictorian and was graduated cum laude.

In 1936, Judge Sorkin was admitted to the New York Bar and immediately joined his brother, already a lawyer, in their own firm. Shortly thereafter, he began his foray into public and political life. He acted as an arbitrator in the city's small claims court. Today, on his chamber wall he proudly displays a letter of thanks from then New York Governor Franklin D. Roosevelt, which Sorkin noted, led to his subsequent service to the New York County Democratic Committee.

Two years after World War II started, the young attorney began to feel he was not doing his duty. "I knew I couldn't join the boys going off to fight in the war," he said, "but I felt I had to do something to aid my country in this time of peril." So he joined Black leaders in Harlem in a campaign to sell more than $250,000 in war bonds —more than three

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BEACON *from page 69*

times Harlem's quota. Before that he served in civil defense and set up a station where citizens could place their fingerprints on file for identification in case of death or injury in an air raid.

Shortly after the war ended, Sorkin was employed on the legal staff of the city's commissioner of investigation and was soon promoted to deputy commissioner. During that five-year tenure, he led a successful investigation into corruption among top-level officials of the city housing rent commission. New York Mayor William O'Dwyer then rewarded his efforts by naming Sorkin a member of the rent commission while maintaining his job as deputy commissioner of investigation, a dual role he played until 1951.

After that, Judge Sorkin returned to private practice and unleashed much of his energies on community-oriented projects. He became president of Congregation Ahavath Israel, a synagogue founded by his grandfather and the place where the judge had been bar mitzvahed some 25 years earlier. During that time Judge Sorkin turned to Scouting as a volunteer. He served as a member of the executive board of the Greater New York Councils and in that capacity greatly helped expand the programs of Scouting for the handicapped.

Active in numerous other organizations and community activities, Judge Sorkin is a member of the Elks, and was the first person admitted to a Masonic lodge after the Masons waived its requirement that all members be physically and mentally capable of supporting themselves.

It was early in 1955 before attorney Sorkin returned to political office. It was then that he received a mayoral appointment to fill an unexpired vacancy as a municipal court justice. The appointment was effective only to the end of that year, but Judge Sorkin then ran for the position and was overwhelmingly elected to a full term in his own right. When the New York Court System was reorganized in 1962, Judge Sorkin was made a civil court judge, a position for which he had the endorsement of all political parties in the city when he was reelected in 1965 and 1975.

His appointment and subsequent election to the bench did not slow Judge Sorkin's apparently unquenchable willingness to serve the people in other ways. In 1965, he became Upper Manhattan's district chairman for the BSA, and the following year was appointed by Mayor John V. Lindsay to the Mayor's Advisory Committee on the Handicapped. In that capacity, he advocated that the architecture of all buildings erected in New York City be drawn to accommodate the needs of those with physical limitations.

That same concern for all the handicapped has been initiated since the Advisory Committee on Scouting for the Handicapped was formed by Sorkin in 1974.

Plans are underway to train Scouting professionals and volunteers in methods of working with handicapped children. Architects are at work on designs for a troop campsite with special facilities for the handicapped at upstate New York's Ten-Mile River Camp.

"We want to impress very firmly upon everyone concerned," says Judge Sorkin "that handicapped youngsters have needs that are no different from any other youngsters, and that every effort should be made to bring the two groups together whenever possible. Handicapped children need to feel that they are a part of society. They have to have a strong sense of belonging."

Because of Judge Sorkin's persistence in seeking to prevent his limitations from dominating his life, those who know him say that they are seldom conscious of his handicap. "To me, he is a whole man in every respect," says Justice Edward Thompson, administrative judge of the city civil court system. "He is one of the most competent, productive judges in the civil court. Despite his physical condition, he has never shirked his duty, never sought special privileges. As a matter of fact, he is always ready and willing to take on added responsibilities if the need arises."

Ted Accas, assistant Scout executive of the Greater New York Councils calls Judge Sorkin, ". . . a great asset to the council. His commitment to Scouting is total. He approaches his work with the Committee on Scouting for the Handicapped with a zeal that is rare and deep." The council's volunteer relationships specialist, Al Iverson, agrees. "Sorkin's leadership has been admirable. He gives every aspect of his work such close personal attention that it's sometimes difficult to see how he does so many things so well."

Judge Sorkin himself sees his life as living proof that a man, despite his limitations, can achieve just about anything he puts his mind to.

"Throughout all my difficult years of adjustment," he says "I was given strength and courage from the wisdom of God, His love and that of my family and friends. For me the most important lesson of my life is that all men are created in the image and likeness of God, equal in His sight; and all men can strive for attainment, for achievement—and, yes, even for perfection." ■

Senator **Stafford**. At this point the chair will announce that the next hearing of this subcommittee, the Subcommittee on the Handicapped of the Committee on Human Resources, will be held on Monday, February 28, in this room, room 4232, at 9:30 in the morning.

Again, the chair thanks you all and declares the subcommittee in adjournment until Monday morning at 9:30.

[Whereupon, at 12:05 p.m., the hearing was recessed, to reconvene Monday, February 28, 1977, at 9:30 a.m.]

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